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STUDIES
OF
N A T U R E.

BY
James-Henry-Bernardin
DE SAINT-PIERRE.

.....MISERIS SUCCURRERE DISCO.

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C O N T E N T S.

VOL. II.



	Page
E XPLANATION of the Plates.	
Flowers. Plate III. —————	v
Volatile Grains. Plate IV. —————	ix
Aquatic Grains. Plate V. —————	xi



SEQUEL OF STUDY X.	Of the Human Figure —————	1
	Of Concerts —————	23
	Of some other Laws of Nature hitherto im- perfectly known —————	43
STUDY XI.	Applications of some general Laws of Na- ture to Plants —————	77
	Elementary Harmonies of Plants —————	92
	<i>Elementary Harmonies of Plants with the Sun, by the Flowers</i> —————	ib.
	<i>Elementary Harmonies of Plants with the Water and the Air, by Means of their Leaves and their Fruits</i> —————	120
	Vegetable Harmonies of Plants —————	183
	Animal Harmonies of Plants —————	197
	Human Harmonies of Plants —————	233
	<i>Elementary Harmonies of Plants, relatively to Man</i> —————	ib.
	<i>Vegetable Harmonies of Plants with Man</i> —————	244
	<i>Animal Harmonies of Plants with Man</i> —————	251
	<i>Human, or Elementary Harmonies of Plants</i> —————	255

	Page
STUDY XII. Of some Moral Laws of Nature	289
<i>Weakness of Reason, of Feeling; Proofs of the Divinity, and of the Immortality of the Soul from Feeling</i>	289
Of Physical Sensations	323
<i>Of the Sense of Tasting</i>	324
<i>Of the Sense of Smelling</i>	326
<i>Of the Sense of Seeing</i>	327
<i>Of the Sense of Hearing</i>	335
<i>Of the Sense of Touching</i>	340
Of the Sentiments of the Soul, and, first,	
<i>Of mental Affections</i>	344
Of the Sentiment of Innocence	348
<i>Of Pity</i>	ib.
<i>Of the Love of Country</i>	351
Of the Sentiment of Admiration	354
<i>Of the Marvellous</i>	355
<i>The Pleasure of Mystery</i>	357
<i>The Pleasure of Ignorance</i>	358
Of the Sentiment of Melancholy	363
<i>The Pleasure of Ruin</i>	ib.
<i>The Pleasure of Tombs</i>	375
<i>Ruins of Nature</i>	380
<i>The Pleasure of Solitude</i>	382
Of the Sentiment of Love	ib.
Of some other Sentiments of Deity, and, among others, of that of Virtue	404
STUDY XIII. Application of the Laws of Nature to the Disorders of Society	422
Of Paris	492
Of Nobility	545
Of an Elysium	549
Of the Clergy	578
STUDY XIV. Of Education	585
National Schools	609
Recapitulation	644

EXPLANATION OF THE PLATES.

FLOWERS. PLATE III.

Volume II. Page 106.

AS the explanation of this Plate is inserted in the text, all I shall say of it here is this, that the forms of flowers, which have a direct relation to the Sun, may all be reduced to those five primary patterns of flowers, to reverberated perpendicular, conic, spheric, elliptic, and plane or parabolic; and flowers which have negative relations to the Sun, to the five other patterns of flowers in parasol, which are here represented in contrast with the first. At the same time, though these last be of forms much more diversified than reverberated flowers, all their negative species may be referred to those five positive forms.

I am of opinion, that if there were added to those five positive, or primordial forms, a certain number of accents, to express the modifications of them, we should have the true characters of the florification, and an alphabet of that agreeable part of vegetation. I likewise presume that by means of this alphabet, it might be possible to characterize, on geographical Charts, the different sites of the vegetable kingdom. It would be sufficient to apply the signs of them to the forests which are there represented; for on seeing in the Chart, for the sake of supposition, that of the reverberated perpendicular, expressed by an ear of corn, or a prominent cone, we should instantly distinguish in it the forests

of the North, or those of cold and lofty mountains. Particular accents, superadded to this character of prominent cone, would distinguish from each other the pine, the epicæa, the laryx, and the cedar; and rays issuing from these modified characters, would indicate the extent of the kingdoms of those different species of trees. The thing is not so difficult as may be imagined. Geography easily represents forests upon maps; all that would be farther requisite, therefore, is to affix to them certain signs, in order to ascertain their species, and those signs might likewise characterize, as we have seen, the latitude, or the elevation of the soil. Besides, we should leave out of such botanical Charts a multitude of political divisions, the names of which, in large characters, uselessly fill up a great deal of room. We should represent them in the domains of Nature only, and not those of men. Thus by means of these botanical signs, we might distinguish, at a single glance, on a map, the productions natural to each soil, the forests with their different species of trees, nay, the meadows too with the varieties of their herbage. There might be farther conveyed the humidity or the dryness of the territory, by adding to the signs of the flowers, the characters of the leaves and seeds of vegetables. To these might afterwards be affixed, on the cities and villages represented, ciphers expressing the number of families which inhabit them, as I have seen in Turkish maps: thus we should have Charts really geographic, presenting at the first glance, an image of the richness and of the temperature of the territory, and of the number of it's inhabitants. After all, this is not a plan which I presume to prescribe, but ideas which I have ventured to suggest, to be pursued, improved, and brought to perfection.

VOLATILE GRAINS. PLATE IV,

Volume II. Page 135.

HERE is presented, on the one hand, the *spartha*, or rush of the Spanish mountains, hollowed into a gutter, for the purpose of receiving the rain water ; and, on the other, the cylindric or full rush of the marshes. The grain of this last resembles in it's state of expansion the eggs of a lobster. I have not been able to procure any of the grains of the *spartha* ; but I have no doubt that, in opposition to those of the rush of the marshes, it must have a volatile character. I do not so much as know whether the *spartha* fructifies in our climate. Messrs. *Theuin*, the principal gardeners of the Royal Garden at Paris, could easily have gratified my curiosity in this respect. To these gentlemen I stand indebted for furnishing me with most of the grains and leaves which I have got engraved for this Work, among others the cone of the cedar of Lebanon ; but accustomed in my solitary studies to investigate in Nature alone the solution of the difficulties which she throws in my way, I did not make application to them, though their hearts are replete with liberality and complaisance toward the ignorant as well as the learned.

Whatever the case may be as to this, it is to the fruit that Nature attaches the character of volatility ; and it is by the leaf that she indicates the nature of the site in which the vegetable is destined to grow. Accordingly we perceive in this plate the cone of the cedar to be composed of thin flakes, like the artichoke. Every flake carries it's kernel ; such is the one here represented detached from the cone ; and each of them, as the fruit comes to maturity, flies off,
by

by the help of the winds, toward the summit of the lofty mountains to which it is destined. Remark likewise that the leaves of the cedar are filiform; in order to resist the winds, which are violent on lofty mountains, and they are aggregated into clusters resembling pencils, for the purpose of collecting in the air the vapours which float about in it. Each leaf of this tree has more than one aqueduct traced in it lengthwise; but being extremely minute, it was impossible to express it in the engraving. Farther, that filiform and capillaceous shape, so well adapted to resisting the winds, as well as that which is of the sword-blade form, is common to vegetables of the mountains, such as pines, larches, cedars, palm-trees; it is likewise frequently found on the edge of waters equally exposed to violent winds, as in rushes, reeds, the leaves of the willow: but the foliage of these last differs essentially from that of the first, in that there is no aqueduct in it, whereas the leaves of mountain vegetables have one; neither is their aggregation similar.

The dandelion grows like the cedar, in dry and elevated situations. Its grains are suspended to a complete sphere of shuttle-cocks, which forms outwardly a very regular polyedron, having a multitude of hexagonal or pentagonal faces. These faces are not expressed in the print, because it has been copied after that of a highly valued botanical Work, but which, like books in every department of literature, collects only the characters which make for a favourite system. The leaf of the dandelion particularly determines its natural site; it is broad and fleshy, because expanding itself close to the ground, on which it forms stars of verdure, it has nothing to fear from the winds: it is deeply indented, like the teeth of a saw, for the purpose of opening a passage to the grasses; and its indentings are bent inward to catch the rain-water, and convey it to the roots. Thus Nature adapts the means to each subject, and redoubles her attention in proportion to its weakness. The
sphere

sphere of the dandelion is more artfully formed than the cone of the cedar, and beyond all contradiction much more volatile. It requires a tempest to carry the seeds of the cedar to any considerable distance; but the breath of the zephyr is sufficient to resow those of the dandelion. A Lebanon is likewise necessary for planting the first; but the second needs only a mole-hill. This small vegetable is likewise more useful in the World than the cedar; it serves for food to a great many quadrupeds, and to a variety of small birds, which fatten on it's grains. It is very salutary to the human species, especially in the Spring season. We accordingly find great numbers of poor people at that time picking up it's young shoots in the fields. It is moreover the only plant which Nature presents gratuitously to Man in our Climates. It universally thrives in dry places, and even in the seams of the pavement. It frequently carpets the court-yards of Hotels, the masters of which are not over-burthened with vassals, and seems to invite the miserable to walk in. It's gold coloured flowers very agreeably enamel the foot of walls, and it's feathered sphere, raised upon a long shaft, in the bosom of a star of verdure, is by no means destitute of beauty.

It is the leaf then which particularly determines the natural site of a vegetable; for as we have seen there are aquatic plants which have their grains volatile, because they grow on the brink of lakes or marshes which have no currents, such as the willow and the reed; but their leaves in that case have no aqueduct. Nay, there are some which have a pendent direction, and which from that attitude refuse to admit the water from Heaven. The maple of Virginia, which delights in the brinks of lakes, marshes, and creeks, has grains attached to membranous wings, resembling those of a fly, as the seeds of the mountain maple represented in the plate. But there is this remarkable difference between them, that the broad leaf of the first is pendent,

dent, and attached to a long tail ; that this tail, so far from being furnished with an aqueduct has a ridge ; and that the leaf of the mountain maple, which is of a moderate size, angular and barked, for resisting the winds, rises almost vertically, and bears an aqueduct on it's tail, to receive the waters of Heaven;

AQUATIC GRAINS. PLATE V.

Volume II. Page 152.

AQUATIC grains have characters entirely opposite to those which are produced on the mountains; if we except, as has been said, those which thrive on the brink of stagnant waters; but even these possess at once volatile and nautical characters, for they are amphibious. They swim along the surface of the water, and they fly through the air; such is that of the willow and several others. It is the leaf which determines the site, as we have observed, for aquatic plants never have any aqueduct on their leaves. Nay, most of them } repel the water. The leaves of the nymphæa and of the reed are never wet. It is likewise so with those of the nasturtium, which are never humid, however copiously the rain may fall, though that plant is excessively fond of the water; for the culture of it consumes an incredible quantity. I am persuaded that if a morass were sown with plants of this sort, it would be speedily dried up. The leaf of the martinia of Vera Cruz, which is here represented among aquatic plants, is, on the contrary, always humid. It has even in it's first expansion a fluting on it's tail. From this double mountain character I am disposed to suspect that the martinia naturally grows on the parched and sandy shores of the Sea; for Nature, in the view of varying her harmonies, extends very dry places along the brink of the waters, just as she deposits sheets of water and morasses in the bosom of mountains. But from the form of the pod of the martinia, which resembles a hook for fishing gilt-heads, I believe it to be destined to grow in situations exposed to inundations of the Sea, as is in fact the case with the territory of Vera Cruz, from
whence

whence this species originally is. I presume therefore that when the shores of Vera Cruz are overflowed by high tides, you must see fishes caught by this plant, for the stem of it's pod is not easily broken off; it's two crotchets are pointed like fishing-hooks, are elastic, and hard as horn. Besides when it is soaked in water, it's furrows, shaded with black, shine as if they were filled with globules of quick-silver. Now the lustre of this light is a farther bait to attract the fishes. I present these merely as conjectures; but I found them on a principle which is indubitably certain, namely, That Nature has made nothing in vain.

STUDIES OF NATURE.

SEQUEL OF STUDY X.

OF THE HUMAN FIGURE.

ALL the harmonic expressions are combined in the Human Figure. In treating this article, I shall confine myself to the examination of some of those which compose the head of Man. Observe, it's form is an approximation to the spherical, which, as we have seen, is *the* form, by way of excellence. I do not believe that this configuration is common to it with that of any animal whatever. On it's anterior part is traced the oval of the face, terminated by the triangle of the nose, and encompassed by the radiations of the hair. The head is, besides, supported by a neck of considerably less diameter than itself, which detaches it from the body by a concave part.

This slight sketch presents to us, at first glance, the five harmonic terms of the elementary generation of forms. The hair exhibits lines; the nose the triangle; the head the sphere; the face the oval; and the void under the chin the parabola. The neck, which, like a column, sustains the head, exhibits, likewise, the very agreeable harmonic form of the cylinder, composed of the circular and quadrilateral.

These forms, however, are not traced in a stiff and geometrical manner, but imperceptibly run into each

other, and mutually blend, as the parts of the same whole ought to do. Thus the hair does not fall in straight lines, but, in flowing ringlets, and harmonizes with the oval of the face. The triangle of the nose is neither acute, nor does it present a right angle; but, by the undulatory swelling of the nostrils, presents a harmony with the heart-form of the mouth, and, sloping toward the forehead, melts away into the cavities of the eyes. The spheroid of the head, in like manner, amalgamates with the oval of the face. The same thing holds with respect to the other parts, as Nature employs, in their general combination, the roundings of the forehead, of the cheeks, of the chin, of the neck, that is, portions of the most beautiful of harmonic expressions, namely the sphere.

There are, farther, several remarkable proportions which form, with each other, very pleasing harmonies and contrasts: such is that of the forehead, which presents a quadrilateral form, in opposition to the triangle, composed of the eyes and the mouth; and that of the ears, formed of very ingenious acoustic curves, such as are not to be met with in the auditory organ of animals, because, in the case of mere animals, the ear is not intended to collect, like that of Man, all the modulations of speech.

But I must be permitted to expatiate somewhat more at large on the charming forms, assigned by Nature to the eyes and the mouth, which she has placed in the full blaze of evidence, because they are the two active organs of the soul. The mouth consists of two lips, of which the upper is moulded into the shape of a heart, that form so lovely as to have become

come proverbial for it's beauty; and the under is rounded into a demi-cylindric segment. In the opening between the lips, we have a glimpse of the quadrilateral figure of the teeth, whose perpendicular and parallel lines contrast most agreeably with the round forms adjoining, and so much the more, as we have seen, that the first generative term being brought into union with the supremely excellent harmonic term, that is, the straight line with the spherical form, the most harmonic of all contrasts results from it.

The same relations are to be found in the eyes, the forms of which combine still more the harmonic elementary expressions; as it was fit the chief of all the organs should do. They are two globes, fringed on the lids with eye-lashes, radiating with divergent pencil-strokes, which form with them a most delightful contrast, and present a striking consonance with the Sun, after which they seem to have been modelled, having, like that orb, a spherical figure, encircled with divergent rays, in the eye-lashes; having a movement of self-rotation, and possessing the power, like him, of veiling themselves in clouds by means of their lids.

The same elementary harmonics may be traced in the colours of the head, as well as in it's forms; for we have in the face, the pure white exhibited in the teeth and in the eyes; then the shades of yellow, which dissolve into it's carnation, as the Painters well know; after that the red, the eminently excellent colour, which glows on the lips and on the cheeks. You farther remark the blue of the veins, and sometimes that of the eye-balls; and, finally, the black of the

hair which, by it's opposition, gives relief to the colours of the face, as the vacuum of the neck detaches the forms of the head.

You will please to observe, that Nature employs not, in decorating the human face, colours harshly opposed; but blends them, as she does the forms, softly and insensibly into each other. Thus, the white melts here into the yellow, and there into the red. The blue of the veins has a greenish cast. The hair is rarely of a jet black; but brown, chestnut, flaxen, and, in general, of a colour into which a slight tint of the carnation enters, in order to prevent a violently harsh opposition. You will farther observe, that as she employs spherical segments in forming the muscles which unite the organs; and in order particularly to distinguish these very organs, she makes use of red for the same purposes. She has, accordingly, extended a slight shade of it to the forehead, which she has strengthened upon the cheeks, and which she has applied pure and unmixed to the mouth, that organ of the heart, where it forms a most agreeable contrast with the whiteness of the teeth. The union of this colour, with that harmonic form, is the most powerful consonance of beauty; and it is worthy of remark, that wherever the spherieal forms swell, there the red colour strengthens, except in the eyes.

As the eyes are the principal organs of the soul, they are destined to express all it's emotions; which could not have been done with the harmonic red tint, for this would have given but one single expression. Nature, in order there to express the contrary passions, has united in the eye the two most opposite of colours,
the

the white of the orbit and the black of the iris, and sometimes of the ball, which form a very harsh opposition, when the globes of the eyes are displayed in the full extent of their diameter; but by means of the eye-lids, which Man can contract, or dilate, at pleasure, he is enabled to give them the expression of all the passions, from love to fury.

Those eyes whose balls are blue are naturally the softest, because the opposition, in this case, is less harsh with the adjacent white; but they are the most terrible of all when animated with rage, and this from a moral contrast, which constrains us to consider those as the most formidable of all objects, that menace evil, after having encouraged us to expect good. Persons, therefore, who are thus distinguished, ought to be carefully on their guard against treachery to that character of benevolence bestowed on them by Nature; for blue eyes express, by their colour, something enchantingly celestial.

As to the movements of the muscles of the face, it would be extremely difficult to describe them, though I am fully persuaded it might be possible to explain their Laws. Whoever shall attempt this, must of necessity refer them to the moral affections. Those of joy are horizontal, as if the soul, in the enjoyment of felicity, had a disposition to extend itself. Those of chagrin are perpendicular, as if, under the pressure of calamity, the mind was looking toward Heaven for refuge, or seeking it in the bosom of the earth. Into such an explanation of the Laws of muscular motion must likewise enter, the alterations of colours, and the contractions of forms, and in these, at least, we

B 3

shall

shall discover the truth of the principle which we have laid down, that the expression of pleasure is in the harmony of contraries; blending with each other in colours, forms, and motions; and that the expression of pain consists in the violence of their oppositions. The eyes alone have motions ineffable; and it is remarkable, that, under the influence of very strong emotions, they are suffused with tears, and thus seem to have a farther analogy with the orb of day, who, in the season of tempests, shrouds himself in rainy distillations.

The principal organs of sense, four of which are placed in the head, have particular contrasts, which detach their spherical forms, by means of radiated forms; and their shining colours by means of dusky tints. Thus the bright organ of vision is contrasted by the eye-brows; those of smell and taste, by the mustaches; the organ of hearing, by that part of the hair called the *favourite* lock, which separates the ear from the face; and the face itself is distinguished from the rest of the head, by the beard, and by the hair.

We shall not here examine the other proportions of the human figure in the cylindric form of the neck, opposed to the spheroid of the head, and to the plane surface of the breast; the hemispherical forms of the paps, which contrast with the flatness of the chest; as well as the cylindrical pyramids of the arms and fingers with the omoplate of the shoulders; the consonances of the fingers with the arms, by means of three similar articulations, with a multitude of other curvatures, and of other harmonies, which, hitherto, have

have not so much as a name in any language, though they are, in every country, the all-powerful expression of beauty.

The human body is the only one which unites in itself, the modulations, and the concerts, inexpressibly agreeable, of the five elementary forms, and of the five primordial colours, without exhibiting any thing of the harsh and rude oppositions perceptible in the brute creation, such as the prickles of the hedgehog, the horns of the bull, the tusks of the wild-boar, the fangs of the lion, the marbled skin of the dog, and the livid and disgusting colours of venomous animals. It is the only one of which the first touch is perceptible, and which you can see completely; other animals being disguised under hair, or feathers, or scales, which conceal their limbs, their shape, their skin. Farther, it is the only form which, in its perpendicular attitude, displays all its positions and directions at once; for you can hardly perceive more of a quadruped, of a bird, of a fish, than one half, in the horizontal position which is proper to them, because the upper part of their body conceals the under.

We must, likewise, remark, that Man's progressive motion is subject to neither the shocks, nor the tardiness of movement of most quadrupeds, nor to the rapidity of that of birds; but is the result of movements the most harmonic, as his figure is, of forms, and of colours, the most delightful.*

The

* It has been maintained by certain celebrated Authors, that the Negroes consider their own colour as more beautiful than that of the whites; but it is a mistake. I have put many a question,

The more that the multiplied consonances of the human figure are agreeable, the more disgusting are it's dissonances. This is the reason that, on the face
of

on this subject, to black people, who were in my own service, in the Isle of France, and who were at perfect liberty to tell what they really thought, especially on a subject so indifferent to slaves, as the beauty of the whites. I sometimes asked them whether of the two they would prefer, a black wife, or a white? They never hesitated an instant in declaring their preference of the white women. Nay, I have seen a Negro, who had been almost dead alive by the whip, in one of our plantations, express the highest delight when the scars of his sores began to whiten, because it suggested the hope, that he was thereby going to change colour, and to be negro no longer. The poor wretch would gladly have parted with his whole hide to become white. This preference we shall be told is, in that case, the effect of the superiority which they are obliged to ascribe to the Europeans. But the tyranny of their masters ought rather to inspire abhorrence of the colour. Besides, the black men and women of our colonies, express the same tastes that our peasantry at home do, for stuffs of lively and glaring colours. Their supreme luxury in dress is a red handkerchief tied round the head. Nature has bestowed no other tints on the roses of Africa than upon those of Europe.

If the judgment of black slaves is considered as a suspicious authority on the subject, we may refer the decisions to the Sovereigns of Africa, who are under no temptation to dissimble. They fairly acknowledge that in this, as well as in many other respects, they have been more hardly dealt with than the Europeans. African Princes have made frequent application to the Governors of the English, Dutch, and French settlements on the coast, for white women, under a promise of very ample privileges in return. *Lamb*, an English agent at Ardra, when prisoner to the King of Dahomay, in the year 1724, sent word to the Governor of the English fort of Juida, that if he could send a white woman, or even a mulatto, to this Prince, he might acquire an unbounded influence over his mind. (*General History of Voyages, by the Abbé Prevost*. Book viii. page 96.)

Another

of the Earth, there is nothing so beautiful as a handsome man, nothing so shocking as a very ugly one.

This

Another King, on a different part of the coast of Africa, promised one day to a Capuchin Missionary, who was preaching the Gospel in his presence, to dismiss his seraglio, and embrace Christianity, if he would procure him a white woman to wife. The zealous Missionary immediately repaired to the nearest Portuguese settlement; and having enquired whether there might not be among them some poor and virtuous damsel, such as might suit his purpose, he was informed of such a person, the niece of a decayed man of family, who lived in a state of great privacy. He waited for her one Sunday morning, at the door of the church, as she was returning from mass with her kinsman; and addressing himself to the uncle, before all the people, charged him, in the name of God, and as he valued the interests of religion, that he would bestow his niece in marriage on the Negro King. The gentleman and his niece having given their consent, the black Prince married her, after having dismissed all his other women, and received public baptism. (*History of Ethiopia, by Labat.*)

The best informed travellers relate many such anecdotes, of a similar preference expressed by the black Sovereigns of Africa, and of southern Asia. *Thomas Rowe*, Ambassador from England at the Court of the Mogul *Selim-Scha*, relates, that a very cordial reception was given by this powerful Monarch, to certain Portuguese Jesuits, who had come as missionaries into his dominions, with a view to obtain, through their means, some women of their country to recruit his seraglio. He began with conferring on them singular privileges; had apartments provided for them in the vicinity of his palace, and admitted them to his most intimate familiarity: but perceiving that those good fathers discovered no great inclination to gratify his desires, he practised a very ingenious artifice to draw them into compliance. He expressed an extreme partiality to the Christian Religion; and pretending that he was restrained, merely by reasons of State, from openly embracing it, he gave strict orders to two of his nephews to attend punctually on the catechetical instructions of the missionaries. When the young men

This farther suggests a reason why it will be for ever impossible for art to produce a perfect imitation of the human figure, from the difficulty of uniting

men had acquired a competent degree of knowledge, he enjoined them to get themselves baptized, and, this being complied with, he thus addressed them: "It is now no longer in your power to marry pagan women, and of this country; for you have made profession of Christianity. It is the duty of the fathers, who baptized you, to procure you wives. Tell them they must send to Portugal for women to be your brides." The young profelytes did not fail to make this demand on the good fathers; who, suspecting that the Mogul's real intention, in marrying his nephews to Portuguese wives, was to procure a supply of white women for his seraglio, refused to engage in this negociation. Their refusal highly incensed *Selim Schah*, and exposed them to much persecution: he immediately commanded his nephews to renounce Christianity. (*Memoirs of Thomas Rowe, Thevenot's Collection.*)

The black colour of the skin is, as we shall presently see, a blessing from Heaven to the Nations of the South, because it absorbs the reflexes of the burning Sun under which they live. But the men of those Nations do not the less, on that account, consider white women as more beautiful than the black, for the same reason that they think the day more beautiful than the night, because the harmonies of colours and of lights render themselves perceptible in the complexion of the whites, whereas they almost entirely disappear in that of the blacks, who can pretend to no competition with the others, in point of beauty, except as to form and stature.

The proportions of the human figure, having been taken, as we have just seen, from the most beautiful forms of Nature, are become, in their turn, models of beauty for Man. If we attend to this, we shall find, that the forms which please us most in works of art, as those of antique vases, and the relations of height and breadth in monuments, have been taken from the human figure. It is well known that the Ionic column, with it's capital and it's flutings, was imitated after the shape, the head-dress, and the drapery of the Grecian young women.

in it all the harmonies; and from the still greater difficulty of effecting a complete combination of those which are of a different nature. For example, the Painter may succeed tolerably in imitating the colours of the face, and the Sculptor in expressing it's forms. But were an attempt made to unite the harmony of colours and of forms in a single bust, such a production will be very inferior to a mere picture, or to a mere piece of sculpture, because it will combine particular dissonances of colours and of forms, besides their general dissonance, which is still more strongly marked. If to these it were farther attempted to add the harmony of movements, as in the case of an automaton, this would only aggravate the incongruity. Were art to continue it's effort, and try to bestow the gift of speech likewise, this must produce a fourth dissonance, which would be absolutely hideous; for here the intellectual system would clash frightfully with the physical system. It is, accordingly, matter of no surprize to me, that *St. Thomas Aquinas* was so shocked at the speaking head, in constructing which, his master *Albert the Great* had employed so many years, that, under the influence of horror, he instantly broke it to shivers. It must have produced on him the same impression which he would have felt, had he heard an articulate voice issuing out of a dead man's mouth. Such labours, in general, do the Artist much honour; but they demonstrate the weakness of Art, which falls below Nature just in proportion as it aims at uniting more of her harmonies. Instead of blending them, as Nature herself does, Art can only place them in opposition.

All this proves the truth of the principle which we have laid down, namely, that harmony results from the union of two contraries, and discord from their collision : and the more agreeable that the harmonies of an object are, the more disgusting are it's discordances. This is the real origin of pleasure and of dislike, in physics as in morals, and the reason why the same object so frequently excites affection and aversion.

A great variety of very interesting reflections remain to be made on the human figure, especially by connecting with it the moral sensations, which alone give expression to the features. We shall introduce some of these in the sequel of this Work, when we come to speak of sentiment. Be it as it may, the physical beauty of Man is so striking, in the eyes even of the animal creation, that to it principally must be ascribed the empire which he exercises over them, in every part of the Earth. The feeble flee for refuge under his protection, and the most powerful tremble at sight of him. *Mathiola* relates, that the lark will save herself amidst troops of men, when she perceives the bird of prey hovering over her. The reality of this instinct was confirmed to me by an officer who was once an eye-witness of one, in such circumstances, fleeing for safety among a very distinguished squadron of cavalry, in which he then served ; but the trooper whose particular protection she sought, trampled her to death under his horse's feet ; a most barbarous action, which drew on him, and justly, the indignation of every good man in the corps.

I myself have seen a stag, when run down by the
hounds,

hounds, appeal with sobs for relief, to the compassion of persons accidentally passing that way. *Pliny* relates a similar fact, and it is consistent with my own experience, when I was in the Isle of France, which I have detailed in the journal of my Voyage to that Island. I have seen, in the farm-yards, the Indians, under the impulse of love, go and throw themselves chuckling at the feet of the country-people. If we meet less frequently with instances of the effect of animal confidence in Man, it is because of the noise of our fowling-pieces, scaring them incessantly, and of the continual other persecutions which they are doomed to undergo.

It is well known with what familiarity the monkeys, and fowls of all kinds, approach travellers in the forests of India.* I have seen at the Cape of Good-Hope, in Cape-town itself, the shores of the Sea swarming with water-fowls, which perched confidently on the shallops, and a large wild pelican playing close by the custom-house with a great dog, whose head she took into her enormous beak. This spectacle conveyed to me, from the moment of my arrival, a most powerful impression in favour of the happiness of that country, and of the humanity of its inhabitants: nor did my conjecture deceive me.

But dangerous animals, on the contrary, are seized with terror at the sight of Man, unless they be driven from their natural bias by some pressing necessity. An elephant will suffer himself to be led about, in Asia, by a little child. The African lion retires growling, from the cabin of the Hottentot; sur-

* See *Bernier* and *Mandeflo*.

renders up to him the possessions of his ancestors, and seeks for himself a kingdom far remote, in forests, and among rocks, untrodden by the foot of Man. The immense whale, amidst his native element, trembles, and flees away before the puny bark of the Laplander. And thus, to this day, is executed that all-potent Law, which secured empire to Man, though sunk into guilt and wretchedness: “ And the fear of you, and
 “ the dread of you, shall be upon every beast of the
 “ earth, and upon every fowl of the air ; upon all that
 “ moveth upon the earth, and upon all the fishes of
 “ the sea ; into your hand are they delivered.” *

It is singularly remarkable, that, through the whole extent of Nature, there is no animal whatever, nor plant, nor fossil, nor even globe, but what has its consonance and its contrast out of itself, Man excepted. No one visible being enters into society with him but either as his servant or as his slave.

We must, undoubtedly, reckon among the human proportions, that Law so universal, and so wonderful, which produces males and females in equal numbers. Did chance preside over the generation of the human race, as over our alliances, we should one year have an unmixed crop of male children, and another, a race entirely female. Some nations would consist wholly of men, and others, wholly of women ; but all over the Globe, the two sexes are born, within the same space of time, equal in number. A consonance so regular clearly demonstrates, that a Providence is continually watching over the affairs of Mankind, notwithstanding the absurdity and disorder of human

* Genesis, chap. ix. ver. 2.

institutions. This may be considered as a standing testimony to the truth of our Religion, which, likewise, limits Man to one Woman in marriage, and by this conformity to natural Laws, peculiar to itself, seems alone to have emanated from the AUTHOR of Nature. It may fairly be concluded, on the contrary, that a religion which permits or connives at a plurality of wives, must be erroneous.

Ah ! how little acquainted are they with the Laws of Nature, who, in the union of the two sexes, look for nothing farther than the pleasures of sense ! They are only culling the flowers of life, without once tasting of it's fruit. The fair sex ! this is the phrase of our men of pleasure ; women are known to them under no other idea. But the sex is fair only to persons who have no other faculty except that of eyesight. It is besides, to those who have a heart, the creative sex which, at the peril of life, carries Man for nine months in the womb ; and the cherishing sex, which suckles and tends him in infancy. It is the pious sex which conducts him to the altar while he is yet a child, and teaches him to draw in, with the milk of the maternal breast, the love of a religion which the cruel policy of men would frequently render odious to him. It is the pacific sex, which sheds not the blood of a fellow-creature ; the sympathizing sex, which ministers to the sick, and handles without hurting them.

To no purpose does Man pretend to boast of his power and his strength ; if his robust hands are able to subdue iron and brass, those of the woman, more dextrous, and more usefully employed, can spin into threads

threads the flax and the fleeces of the sheep. The one encounters gloomy care with the maxims of philosophy ; the other banishes it by sportiveness and gaiety. The one opposes to external evils the force of his reason ; the other, far happier, eludes them by the mobility of her's. If the man sometimes considers it as his glory to bid defiance to danger in the field of battle, the woman triumphs, in calmly meeting dangers more inevitable, and frequently more cruel, on her bed, and under the banners of pleasure. Thus, they have been created to support together the ills of life, and to form, by their union, the most powerful of consonances, and the sweetest of contrasts.

I am obliged, by the plan of my Work, to proceed, and to refrain from pursuing my reflections on subjects so interesting as the marriage, and the beauty, of Man and Woman. I must, however, hazard some farther observations, extracted from my store, in order to induce others to dive into this rich mine, with the additional value of novelty.

All Philosophers who have made Man their particular study, are agreed, and with good reason, that he is the most wretched of all animals. Most of them appear to have been sensible that an associate was necessary to him, to relieve his burthens, and they have made his happiness, in part, to consist of friendship. This is an evident demonstration of human weakness and misery ; for were Man naturally strong, he would stand in no need of either associate or assistance. Elephants and lions live solitary in the forests. They need no friends, because Nature has made them strong.

It

It is very remarkable that when the Ancients give us a representation of perfect friendship, it is always restricted to two, whatever may be the extent of human weakness; for man is frequently reduced to the necessity of deriving his felicity from the concurring interposition of many beings similar to himself. Several reasons may be assigned for this restriction, the principal of which are deducible from the nature of the human heart, which, from its very weakness, is capable of attaching itself to only one object at once; and which, being compounded of opposite passions that maintain a perpetual counterpoise, is, in some sense, both active and passive, and stands in need of loving and of being beloved, of comforting and of being comforted, of honouring and of being honoured, and so on. Accordingly, all the friendships celebrated in the historic page, existed only between two persons; such as those of *Castor* and *Pollux*; of *Theseus* and *Perithoüs*; of *Hercules* and *Iolas*; of *Orestes* and *Pylades*; of *Alexander* and *Hephestion*, and many others.

It is farther to be remarked, that those singular friendships have ever been associated with virtuous and heroic actions; but whenever the union comprehended more persons than two, it was speedily dissolved by discord, or, if permitted to subsist for any length of time, became famous only for the mischief which it brought on Mankind: such was that of the triumvirate among the Romans. In cases when the associates, in such alliances, were still more numerous, the mischief which they did was always in proportion to the greatness of the number of which they consisted.

ed. Thus, the tyranny of the Decemviri at Rome exhibited a violence still more cruel than that of the Triumviri, for it spread destruction, we may venture to say, without passion, and in cold blood.

There are, likewise, triummillvirates, and decemmillvirates : these are your various descriptions of Corps. With good reason have they obtained the appellation of *Corps* ; for they frequently have a centre distinct from their Country, of which they ought only to be members. They have, likewise, views distinct from those of their Country, a distinct ambition, and distinct interests. They are, with relation to the rest of the citizens, inconstant, detached, destitute of an object, and frequently destitute also of the spirit of patriotism : they are that, in a word, which regular troops are with relation to light troops. They will not suffer them to appear in an avenue along which they themselves are advancing, and dispossess them of the posts which they may have occupied, the whole length of their route. How many revolutions have been effected in Russia by the Strelitzes ; in Rome, by the Pretorian guards ; at Constantinople, by the Janizaries ; and elsewhere, by Corps still more political ! Thus, by a just re-action of Providence, the spirit of Corps has been as fatal to countries, as the spirit of Country has itself been to Mankind.

If the heart of Man admits of but a single object, what judgment shall we form of our modern friendships, embracing as they do, such a multiplicity ? Undoubtedly, if a man has thirty friends, he can bestow on each of them only the thirtieth part of his affection, and can receive, in return, no greater proportion
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of theirs. He must of necessity, therefore, deceive them; for no one is disposed to be a friend by factions.

But, if the truth may be told, such friendships are merely confederacies of ambition; relations interested and purely political, employed entirely in practising mutual illusion, in the view of aggrandizing themselves at the expense of Society; and which would be productive of unspeakable mischief, were they more closely united among themselves, and unless they were counterbalanced by opposite confederacies. Almost all our general associations, accordingly, issue in intestine wars. On the other hand, I do not speak of the inconveniencies which result from particular unions, rather too intimate. The most celebrated friendships of Antiquity have not been, in this respect, wholly exempt from suspicion, though, I am persuaded, they were as virtuous as the persons who were the objects of them.

The AUTHOR of Nature has given to each of us, in our own species, a natural friend, completely adapted to all the demands of human life, capable of supplying all the affections of the heart, and all the restlessness of temperament. He says, from the beginning of the World: "It is not good that the man should be alone: I will make him an help meet for him; —and the LORD GOD made Woman, and brought her unto the Man."* Woman pleases all our senses by her form and by her graces. She has, in her character, every thing that can interest the heart of Man, and at every stage of human life. She merits, by the long and painful solitudes which she

* Genesis, chap. ii. ver. 18, 22.

exercises over our infancy, our respect as a mother, and our gratitude as a nurse ; afterward, as Man advances to youth, she attracts all his love as a mistress ; and in the maturity of manhood, all his tenderness as a wife, his confidence as a faithful steward, his protection, as being feeble ; and, even in old age, she merits our highest consideration, as the source of posterity, and our intimacy, as a friend who has been the companion of our good and bad fortune through life. Her gaiety, nay, her very caprices, balance, at all seasons, the gravity, and the over-reflective constancy of Man, and acquire, reciprocally, a preponderancy over him.

Thus, the defects of the one sex, and the excess of the other, are an exact mutual compensation. They are formed, if I may use the expression, to be grooved into each other, like the corresponding pieces of carpenters-work, the prominent and retreating parts of which constitute a vessel, fit to launch on the stormy ocean of life, and to attain additional strength from the very buffetings of the tempest. Had we not been informed by a Sacred Tradition, that Woman was extracted from the side of Man ; and though this great truth were not every day manifested, in the wonderful birth of the children of the two sexes in equal numbers, we should be speedily instructed in it by our wants. Man without the Woman and Woman without the Man, are imperfect beings, in the order of Nature. But, the greater contrast there is in their characters, the more complete union there is in their harmonies. It is, as we have already briefly hinted, from their oppositions in talents, in tastes, in fortunes, that the most intense and the most durable affection

affection is produced. Marriage is, therefore, the friendship of Nature, and the only real union which is not exposed, like those which exist among men, to estrangement, to rivalry, to jealousies, and to the changes which time is effecting in our inclinations.

But, wherefore are there so few happy marriages among us? I answer, because with us the sexes have divested themselves each of it's proper nature, and assumed the other. It is because the women, with us, adopt the manners of men, from education; and men the manners of women, from habit. The women have been despoiled of the graces, and of the talents, peculiar to their sex, by the masters, the sciences, the customs, the occupations of men. There is no way left save one, but that is infallible, to bring both back to Nature; it is to inspire them with a taste for Religion. By Religion, I do not mean attachment to ceremonies, or systems of Theology; but the religion of the heart, pure, simple, unostentatious; such as it is so beautifully depicted in the Gospel.

Religion will restore to the two sexes, not only their moral character, but their physical beauty. It is not climate, it is not aliment, it is not bodily exercise, nor all these together, which form human beauty; it is the moral sentiment of virtue, which cannot subsist independently of Religion. Aliment and exercise, no doubt, contribute greatly to the magnitude and the expansion of the body; but they have no manner of influence on the beauty of the face, which is the true physiognomy of the soul. It is by no means uncommon to see persons tall and robust disgustingly ugly; with the stature of a giant, and the face of a monkey.

Beauty of face is to such a degree the expression of the harmonies of the soul, that, in every country, those classes of citizens who are, from their condition, obliged to live with others in a state of constraint, are sensibly the homeliest of the society. The truth of this observation may be ascertained, particularly among the noblesse of many of our provinces, who live with each other in the perpetual jealousy of rank, and with their neighbours of an inferior order, in a state of unremitting hostility, for the maintenance of their prerogatives. Most of those Nobles present a complexion bilious and parched. They are meagre, sulky, and perceptibly uglier than the other inhabitants of the same district, though they breathe the same air, live on the same aliments, and, in general, enjoy a superior degree of fortune. Accordingly, they are far from being gentlemen both in name and in fact. Nay, there is a Nation bordering upon ours, the subjects of which are as much celebrated, all over Europe, for their pride as for their homeliness. All those men are rendered hard-favoured from the same causes that most of our children degenerate in look; who, however amiable in early life, become ugly on going to college, from the miseries and irksomeness of these institutions. I say nothing of their natural character, which undergoes the same revolution with their physiomy; this last being always a consequence of the other.

The same thing does not hold good respecting the noblesse of some other of our provincial districts, and the nobility of other parts of Europe. These, living, as they do, in good understanding among themselves,
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and with their compatriots, are, in general, the handsomest men of their Nation, because their social and benevolent spirit is not in a state of incessant constraint and anxiety.

To the same moral causes may be referred the beauty of the features of the Greek and Roman physiognomies, where we generally meet with models so exquisite in their statues and medallions. They were beautiful, because they were happy; they lived in cordial union with their equals, and in the enjoyment of popular favour with the citizens at large. Besides, there were among them no melancholy, moping, monkish institutions, similar to those of our colleges, contrived to disfigure the whole youth of a Nation at once. The descendants of those same Nations are, at this day, far from exhibiting a resemblance to their ancestors, though the climate of their country is not in the smallest degree changed.

It is, farther, to moral causes that we must refer the singularly dignified physiognomies of the great Lords of the Court of *Louis XIV.* as is visible in their portraits. In general, persons of quality being, by their rank, elevated above the rest of the Nation, do not live continually at daggers drawing with each other, and with the other subjects of the State, as is the case of most of our small country-gentlemen. Besides, they are usually educated under the paternal roof, that is, under the blessed influence of domestic enjoyment, and far remote from jealousy and strife. But those of the age of *Louis XIV.* had this distinguished advantage over their posterity, that they were taught to value themselves on beneficence, and

popular affability, and on bestowing their patronage upon talents and virtue, wherever they found them. There is not, perhaps, a great Family of that period, but what has the honour to boast of having brought forward, and raised into distinction, some one man of obscure birth, or of the inferior Nobility, who afterwards rendered himself illustrious, by means of such support, in arts, in literature, in the church, or in the army.

These grandees acted thus, in imitation of the Sovereign, or, perhaps, from a remainder of the spirit of the magnificence of the feudal government, which then expired. Be this as it may, they were handsome, because they were contented and happy ; and this noble emotion of soul toward beneficence, has impressed on their physiognomy a majestic character, which will ever distinguish them from the men of preceding ages, and still more from that which has succeeded.

Observations of this kind are not an object of curiosity merely : they are of much more importance than is generally apprehended ; for it follows as a necessary consequence, that in order to form in a Nation beautiful children, and, of course, handsome men, in both the physical and moral sense of the word, it is not necessary, according to the doctrine of certain medical men, to subject the human species to regular purgations, and under particular aspects of the Moon. Children restricted to a rigid regimen of this sort, as are most of those of our Physicians and Apothecaries, all present wan pasteboard figures ; and when grown up, pale complexions, and bilious temperaments, like their fathers.

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In order to render children beautiful, you must render them physically, but above all, morally happy. You must prevent every possible occasion of vexation to them, not by kindling in their breasts dangerous and headstrong passions, as in the case of spoiled children, but, on the contrary, by teaching them to curb such as they have from Nature, and which society is ever exciting into a state of fermentation ; and especially, by guarding against the communication of every thing unnatural, such as useless and irksome tasks, emulations, rivalships, and the like....But we shall resume this important subject at greater length hereafter.

The ugliness of a child is to be imputed, in almost every case, to his nurse, or to his preceptor. I have sometimes observed, among so many classes of society more or less disfigured by our institutions, some families singularly beautiful. On enquiring into the cause of this, I have found that those families, though of the commonalty, were happier, in a moral respect, than those of other citizens ; that the mothers had suckled their own children ; that the young people had learned their occupations under the paternal roof and inspection ; that they had been treated with much tenderness and indulgence ; that their parents were fondly attached to each other ; that they all lived together, notwithstanding the hardships of their low condition, in a state of liberty and cordiality, which rendered them good, happy, and satisfied.

I have thence deduced this other consequence : That we frequently make a false estimate of the happiness of human life. On seeing here a Gardener, with

with the port of a Roman Emperor ; and there a great Lord, with the mask of a slave, I imagined, at first, that Nature had committed a mistake. But experience demonstrates, that the great Lord in question is, from the hour of his birth to that of his death, placed in a series of positions, which permit him not to gratify his own inclination three times a year. For he is under the necessity, from his infancy upward, to do the will, first of his preceptors and masters ; in more advanced life, that of his prince, of ministers of state, of his rivals, nay, frequently, that of his enemies. Thus he finds fetters innumerable in his very dignities. Our Gardener, on the other hand, passes his whole life without being exposed to the slightest contradiction. Like the Centurion, in the Gospel, he says to his servant, Come, and he cometh ; and to another, Do this, and he doeth it. This demonstrates, that Providence has assigned to our very passions a part widely different from that which society presents to them ; for, in easies innumerable, the most unrelenting slavery is imposed, together with an accumulation of honours ; and, in the meanest of human conditions, we frequently find the possession of the most unbounded empire.

Besides, persons who have been disfigured by the corruptive impression of vicious education and habits, have it in their power to reform their looks ; and I say this principally for the sake of our females, who, in order to gain this point, apply white and red, and patch up faces, like those of dolls, utterly destitute of character. After all they are in the right ; for it is much better to conceal character altogether, than to exhibit

exhibit that of the cruel passions which are often preying upon them ; especially to the eyes of so many of the other sex, who study character, merely to take the advantage of it. There are infallible means in their power of acquiring a beauty altogether irresistible. It is to be internally good, gentle, compassionate, sensible, beneficent, and devout. These affections of a virtuous soul will impress on their features characters altogether celestial, which will appear beautiful even to the farthest extremity of old age.

Nay, I will venture so far as to affirm, that the harsher the traits may be in homely persons, who have suffered degradation from a faulty education, the more sublime and impressive will be the contrasts produced in them by those which they acquire from habits of virtue ; for, when we find goodness under an unpromising exterior, we are as agreeably surprized as at finding violets and primroses under a shrubbery of briars and thorns. Such was the sensation inspired on a first introduction to the crabbed-looking *M. de Turenne* ; and such, in our days, is that which we feel at the first aspect of a certain northern Prince, as justly celebrated for his goodness, as the King, his brother, has rendered himself by his victories. I have no doubt, that the repelling outside of these two great men, may have greatly contributed to give a peculiar prominence to the excellence of their heart. Such too was the beauty of *Socrates*, who, with the features of a profligate, delighted every eye, while he discoursed of virtue.

But to no purpose will a man attempt to decorate his countenance with the indications of good qualities,

lities, to which his heart is a stranger. This false beauty produces an effect still more disgusting than the most decided ugliness ; for when, attracted by an apparent goodness, we actually find dishonesty and perfidy, we are seized with horror, as when we find a serpent lurking in a bed of flowers. Such is the detestable character generally ascribed to courtiers.

Moral beauty, then, is that after which we are bound to aspire, that it's divine irradiations may be diffused over our features, and over our actions. To no purpose will a Princee himself make his boast of high birth, riches, credit, wit ; the People, in order to know him, must look him in the face. The People form their judgment of him entirely from the phyfionomy : it is in every country the first, and frequently the last letter of recommendation.

OF CONCERTS.

Concert is an order formed of several harmonies of various kinds. It differs from simple order in this, that the last is frequently nothing but a series of harmonies of the same species.

Every particuar Work of Nature presents, in different kinds, harmonies, consonances, contrasts ; and forms a real concert. This we shall more amply unfold in the Study which treats of plants. It may henceforward be considered as a well-founded remark, on the subject of those harmonies, and of those contrasts, that vegetables whose flowers have the least lustre are frequented by animals of the most brilliant colours ; and, on the contrary, that the vegetables which are most highly coloured, serve as an
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asylum to the duskiest animals. This is particularly evident in countries situated between the Tropics ; where the trees and herbage, which have few if any apparent flowers, lodge and support birds, insects, nay monkeys, of the most lively colours. It is in the plains of India that the peacock displays his gaudy plumage, on a shrubbery despoiled of verdure by the burning heat of the Sun. In the same climate it is that the parrot race, consisting of so many different species, enamelled with a thousand various colours, perch on the gray bough of the palm-tree, and that clouds of little paroquets, green as the emerald, alight on fields embrowned by the lengthened heats of Summer.

In our temperate regions, on the contrary, most of our birds are dull-coloured, because most of our vegetables have flowers and fruits with shining colours. It is very remarkable, that such of our birds and insects as have lively colours usually choose for their habitation vegetables that have no apparent flowers. Thus, the heath-cock glisters on the gray verdure of the pine, whose apples serve him for food. The goldfinch builds his nest in the rough fullers-thistle. The most beautiful of our caterpillars, which is marbled with scarlet, is to be found on a species of the tithymal, that usually grows in the sands, and amidst the quarries of the forest of Fontainebleau. On the contrary, our birds of dusky hue inhabit shrubbery with gay-coloured flowers. The black-headed bullfinch builds his nest in the white-thorn, and that lovely bird exhibits a farther most agreeable consonance and contrast with the prickly shrub where he resides, by his blood-stained

stained breast, and the sweetness of his song. The nightingale, with brown plumage, delights to nestle in the rose-bush, according to the traditions of the oriental Poets, who have founded many a charming fable on the loves of that melancholy bird for the rose.

I could here exhibit a multitude of other harmonies, of a similar nature, respecting the animals both of our own, and of foreign countries. I have collected these to a very considerable number; but, I acknowledge, they are too incomplete to admit of my forming of them the entire concert of one plant. I shall, however, treat the subject more at large under the article of vegetables. It will be sufficient, at present, to produce a single example, which incontestably proves the existence of those harmonic Laws of Nature: it is this, that they subsist even in places not exposed to the view of the Sun. We always find, in the cells of the mole, fragments of the bulbous root of the colchica, close by the nest of her young. Now, let any one examine the plants which usually grow in our meadows, and he will find none which forms more harmonies and contrasts with the black colour of the mole, than the white, impurpled, and lilach-flowers of the colchica. This plant, likewise, furnishes powerful means of defence to the feeble mole against her natural enemy the dog, who is continually hunting after her in the meadows; for he is poisoned if he eats it. For this reason, the colchica has obtained the trivial name of dog-bane. The mole, then, finds a supply of food for her necessities, and a protection against her enemies, in the colchica, as the
bull-

bull-finch does in the white-thorn. Such harmonies are not only very agreeable objects of speculation, but may be turned to very good practical account; for, from what has just been suggested, it will follow, that if you wish to allure the bullfinch to your shrubbery, you have only to plant the white-thorn; and if you would clear your grounds of the mole, exterminate the bulbs of the colchica.

If to each plant are added it's elementary harmonies, such as those of the season when it appears; of the soil and situation in which it vegetates; the effects of the dews, and of the reflexes of the light on it's foliage; the movements which it undergoes from the action of the winds; it's contrasts and consonances with other plants, and with the quadrupeds, the birds, and the insects, which are peculiar to it; and you will perceive a delightful concert formed all around, the harmonies of which are still unknown to us. It is only, however, by pursuing this track, that we shall be enabled to obtain a glimpse of the immense and magnificent edifice of Nature. I would earnestly intreat Naturalists, persons fond of gardening, Painters, nay Poets likewise, thus to prosecute their studies, and to take frequent draughts from this perennial spring of taste and of delight. They will behold new worlds arising into view, and, without removing from their own Horizon, they will make discoveries infinitely more curious than those which are contained in our books and cabinets, where the productions of the Universe are frittered away and disjointed in the petty drawers of our mechanical systems.

I know not, at present, what name I ought to give to the conformities which those particular concerts have with Man. Certain it undoubtedly is, that there is no Work of Nature but what strengthens it's particular concert, or if you will, it's natural character, by the habitation of Man; and which does not communicate, in it's turn, to the habitation of Man, some expression of grandeur, of gaiety, of terror, or of majesty. There is no verdant mead but what is rendered more cheerful by a dance of shepherdesses and their swains; and no tempest but what acquires additional horror from the shipwreck of a vessel. Nature raises the physical character of her Works to a sublime moral character, by collecting them around mankind. This is not the place to descant at large on the new order of sentiments hereby suggested. I satisfy myself at present with observing, That she not only employs particular concerts to express, in detail, the characters of her Works; but when she means to express these same characters on the great scale, she combines a multitude of harmonies and of contrasts of the same kind, in order to form of them one great general concert, which has only a single expression, let the field of representation be ever so extensive.

Thus, for example, in order to express the maleficent character of a venomous plant, she combines in it clashing oppositions of the forms and colours which are the indications of that maleficence; such as retreating and bristly forms, livid colours, dark greens, with white and black spots, virulent smells.....But when she means to characterize a whole district that

is unwholesome, she collects a multitude of similar dissonances. The air is loaded with thick fogs, the turbid waters exhale only nauseous smells, no vegetable thrives on the putrid soil but such as are disgusting, the *dracunculus*, for instance, the flower of which exhibits the form, the colour, and the smell of an ulcer. If any tree arises in the cloudy atmosphere, it is the yew only, whose red and smoky trunk has the appearance of having passed through the fire, and whose gloomy foliage serves as an asylum only to owls. If any other animal is to be found seeking a retreat under its lurid shade, it is the blood-coloured centipede, or the toad crawling along the humid and rotten ground. By these, or similar signs, Nature scares Man away from noxious situations.

If she intends to give him, at sea, the signal of an impending tempest; as she has opposed, in ferocious animals, the fiery glare of the eyes to the thickness of the eye-brows; the stripes and spots with which they are marked to the yellow colour of their skin, and the stillness of their movements to the thundering noise of their voices; she collects, in like manner, in the sky, and on the deep, a multitude of clashing oppositions, which in concert announce approaching devastation. Dark clouds sweep through the air in the horrible forms of dragons. Here and there, the pale fire of lightning bursts from the gloom; the noise of the thunder, with which their dark womb is impregnated, resounds like the roaring of the celestial lion. The Orb of Day, who can scarcely render himself visible through their rainy and multiplied veils, emits long radiations of a wan and

fickly light. The leaden surface of the Ocean sinks and swells into broad white foaming surges. A hollow murmuring noise seems to issue from those threatening billows. The black shallows whiten at a distance, with horrid sounds, from time to time, interrupted by ominous silence. The Sea, which alternately covers and reveals them, displays to the light of day their cavernous foundations. The Norwegian lom perches on one of their craggy points, uttering lamentable cries, like those of a drowning man. The sea-osprey rises aloft in the air, and not daring to commit herself to the impetuosity of the winds, struggles with a plaintive screaming voice against the tempest, which bends back her stubborn wings. The black procellaria flutters about, grazing the foam of the waves, and seeks, in the cavity of their moving valleys, a shelter from the fury of the winds. If this small and feeble bird happens to perceive a ship in the midst of the Sea, he flies for refuge along her side, and, as a reward for the protection which he solicits, announces the tempest to the mariner before it overtakes him.

Nature uniformly proportions the signs of destruction to the magnitude of the danger. Thus, for example, the signs of tempest off the Cape of Good-Hope far exceed those on our coasts. The celebrated *Vernet*, who has exhibited so many terrifying representations of the Sea, is far from having depicted all the horrors of the watery element. Every storm has its peculiar character, and in every particular latitude. Far different are the storms off the Cape of Good-Hope, from those off Cape Horn; those of
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the Baltic from those of the Mediterranean; those on the banks of Newfoundland from those on the coast of Africa. They farther differ, according to the season of the year, and even according to the hour of the day. Those of Summer are very unlike those of Winter; and widely different is the spectacle of an enraged sea, shining at noon-day under the rays of the Sun, and that of the same sea illuminated, at the midnight hour, by a single flash of lightning. But you perceive in all the clashing oppositions of which I have made mention.

I have remarked one thing in the tempests off the Cape of Good-Hope, which strikingly supports all that I have hitherto advanced respecting the principles of discord and harmony; and which may, perhaps, suggest profound and useful reflection to some one of greater ability than I can pretend to. It is this, That Nature frequently accompanies the signs of the disorder which agitates the Ocean, with agreeable expressions of harmony, that serve only to redouble the horror of the scene.

Thus, for example, in two different storms to which I was exposed in those seas, I did not see the face of Heaven obscured by dark clouds, nor these clouds furrowed by alternate flashes of lightning, nor a sea muddy and lead-coloured, as in the tempests of our climates. The sky, on the contrary, presented a fine blue, and the sea a beautiful azure; there were no other clouds hovering in the air, but small aggregations of a ruddy vapour, dark toward the centre, and illuminated, about the extremities, with the yellow lustre of burnished brass. They took their depar-

ture from a single point in the Horizon, and travelled across the Heavens with the rapidity of a bird flying. When the thunder shivered in pieces our main-mast, in the middle of the night, it did not roll; and emitted only a crack resembling that of a cannon shot off close by us. Two other thunder-claps, which had preceded this one, were exactly similar. This was in the month of June, which is mid-winter at the Cape of Good-Hope.

I was caught in another storm, when doubling the Cape on my return, in the month of January, which is mid-summer in that part of the world. The ground of the Heavens was blue, as in the first, and not above five or six clouds were perceptible above the Horizon; but each of them white, black, cavernous, and of an enormous magnitude, resembled a portion of the Alps suspended in the air. This last was much less violent than the former, with its small ruddy vapours. In both, the sea was of the same beautiful azure colour with the sky; and on the curling crests of the vast billows, rushing like so many cascades, were formed bright coloured rainbows.

These tempests, in the full blaze of light, are inexpressibly tremendous. The soul stands aghast at sight of the indications of tranquillity converted into signs of storm; the unclouded azure in the Heavens, and the rainbow playing upon the waves. The principles of harmony appeared to be completely inverted. Nature seemed to have put on a character of perfidiousness, and to conceal fury under the mask of benevolence.

The shallows of those Latitudes exhibit similar contrasts.

contrasts. *John Hugo de Linfchoten*, who saw those of the Jews at no great distance, in the Mosambique channel, and upon which he was in extreme danger of making shipwreck, informs us, that they have a most hideous aspect, being black, white, and green. Thus Nature increases the characters of terror, by intermingling with them certain agreeable expressions.

There is a farther observation, of essential importance, to be made in this place; namely, That in those awful scenes of danger and affright, the terrible is close upon you, and the agreeable is removed to an immense distance; tumult is in the seas, and serenity in the sky. A prodigious extension is thus given to the sentiment of disorder; for there is no apparent boundary set to tempests of this sort. All depends on the first impulsion which we undergo. The sentiment of infinity that is within us, and which is ever making new efforts to propagate itself farther and farther, seeks to make it's escape from the physical evil wherewith it is surrounded; but repelled, in some sort, by the serenity of the treacherous Horizon, falls back upon itself, and undergoes a severer pang, under the pressure of present painful affections, because their source has the appearance of being invariable.

Such is the Giant of Storms, stationed by Nature at the entrance of the Seas of India, and so well delineated by the pencil of *Camoëns*. Nature, in our climates, produces quite contrary effects; for, during Winter, she redoubles our repose within doors, by covering the face of Heaven with dark and rainy clouds. All depends, as I have just said, on the first

impulfion which the foul receives. *Lucretius* is undoubtedly right in faying, that our pleafure and fecurity, on fhore, are greatly increafed by the fight of a ftorm at fea.

A Painter, accordingly, who wifhed to ftrengthen in a picture, the effect of a beautiful landscape, and the felicity of it's inhabitants, would only have to reprefent, in the back-ground, a veffel at the mercy of the winds and of the raging deep: the happinefs of the fhepherds would, in this cafe, be powerfully heightened by contraft with the diftrefs of the mariners. But if it were his intention, on the contrary, to augment the horrors of a tempeft, it would be neceffary for him to place, in oppofition to the diftrefs of the mariners, the felicity of the fhepherds; and, for this effect, the veffel muft be introduced between the fpectator and the landscape. The firft fentiment depends on the firft impulfion; and the ground contrafting with the fcene, is fo far from being a deviation from Nature, that the leading object is impreffed with additional energy, by being thrown back upon itfelf. Thus, it is poffible, with the fame objects placed differently, to produce directly oppofite effects.

If Nature, by introducing certain agreeable harmonies into fcenes of difcord, redoubles their confufion, fuch as the green colour of the rocks of the Jewefs, or the azure, in the tempefts off the Cape, fhe frequently throws in a difcordance, in concerts the moft delightful, for the purpofe of heightening the pleafurable effect. Thus, a noify water-fall precipitating itfelf into a tranquil valley; or a rugged
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and dusky rock ascending in the midst of a verdant plain, enhances the beauty of a landscape. Thus a mole on a beautiful face gives it additional vivacity. Skilful Artists have sometimes happily imitated those harmonic contrasts. *Callot*, when he intended to aggravate the horror of his infernal scenery, introduced, amidst his demons, the head of a fine woman on the carcase of an animal. On the contrary, the most renowned Greeian Painters, in order to render *Venus* more interesting, represented her with a slight squint in her eyes.

Nature employs offensive contrasts only for the purpose of chasing Man away from some perilous situation. In all the rest of her Works, she employs only harmonic mediums. I must not involve myself in the examination of their different concerts; it is a subject whose riches are inexhaustible. All that could be expected from my scanty fund was the indication of a few of their principles. I shall endeavour, however, to trace a slight sketch of the manner in which she harmonizes the common fields of our harvests, these, being the production of human agriculture, seem abandoned to the monotony that characterizes most of the Works of Man.

First of all, it is remarkable that we here find that charming shade of green, produced by the alliance of the two primordial opposite colours, which are the yellow and the blue. This harmonic colour decomposes itself, in it's turn, by another metamorphosis, toward the time of the harvest, into the three primordial colours, namely, the yellow of the ripening corn, the red of the wild poppy, and the azure of the blue-

bottle. These two plants are found intermingled with the standing corn, all over Europe, let the farmer take what pains he may in sifting the grain, and in weeding his field. They form, by their harmony, a very rich purple tint, which rises admirably on the yellow ground of the corn-field.

If you study these two plants separately, you will find between them a variety of particular contrasts; for the blue-bottle has narrow and slender leaves; but those of the poppy are broad, with deep incisions. The blue-bottle has the corolla of its flowers radiating, and of a delicate azure; but those of the poppy are large, and of a deep red. The blue-bottle throws out divergent stalks; but those of the poppy are straight. We find, besides, among the corn, the cockle, or corn-rose, which rises to the height of the expanded ear, with handsome purple flowers, in form of a trumpet; and the convolvulus, with a flesh-coloured flower, crawling up along the reeds, and surrounding them with verdure like a thyrsus. There is a great variety of other vegetables usually to be found growing among corn, and forming contrasts the most agreeable, most of them exhale the sweetest perfumes; and, when agitated by the Summer's breeze, you would be disposed, from their undulations, to imagine the whole a sea of verdure enamelled with flowers. Add to all the rest a gentle rustling of the ears against each other, most agreeably soothing, which by its soft murmuring sound invites to sleep.

These lovely forests of vegetable beauty are not destitute of inhabitants. You see bustling about under

der their shade, the green-coated scarab, streaked with gold, and the monoceros, of the colour of burnt coffee. This last insect takes delight in a hillock of horse-dung, and is furnished with a ploughshare on his head, with which he removes the ground like a labourer. There are, besides, a variety of charming contrasts in the bees and the butterflies, which are attracted by the flowers of the corn-field, and in the manners of the birds which inhabit them. The far-travelled swallow is continually skimming along their surface, undulating like the waters of a lake; whereas the stationary lark towers above them in a perpendicular direction, within sight of her nest. The domesticated partridge, and transitory quail, there find a situation equally favourable to both, for rearing their young. The hare frequently burrows in their neighbourhood, and quietly nibbles the wild-thistle.

These animals have, with Man, relations of utility, from their fruitfulness and their furs. It is remarkable, that they are to be found over all the corn-districts of Europe, and that their species are varied, according to all the variety of human habitation; for there are different species of quails, partridges, larks, swallows, and hares, adapted to the plains, to the mountains, to the heaths, to the meadows, to the forests, and to the rocks.

As to the corn-plant itself, it has relations innumerable with the wants of Man, and of his domestic animals. It is neither too high nor too low for his stature. It is easily handled and reaped. It furnishes grain to his poultry, bran to his pigs, forage
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and litter to his black cattle and his horses. Every plant that grows in his corn-field possesses virtues particularly adapted to the maladies incident to the condition of the labouring-man. The poppy is a cure for the pleurisy ; it procures sleep ; it stops hemorrhages and spitting of blood. The blue-bottle is a diuretic ; it is vulnerary, cordial and cooling ; it is an antidote to the stings of venomous insects, and a remedy for inflammation of the eyes. Thus the husbandman finds all needful pharmacy, in the field which he cultivates.

The culture of this staff of life discloses to him many other agreeable conceits with his fleeting existence. The direction of its shadow informs him of the hour of the day ; from its progressive growth he learns the rapid flight of the seasons : he reckons the flux of his own fugitive years, by the successions of the guiltless harvests which he has reaped. He is haunted with no apprehension, like the inhabitants of great cities, of conjugal infidelity, or of a too numerous posterity. His labours are always surpassed by the benefits of Nature. When the Sun gets to the sign of Virgo, he summons his kindred, he invites his neighbours, and marches at their head, by the dawning of the day, with sickle in hand, to the ripened field. His heart exults with joy as he binds up the swelling sheaves, while his children dance around them, crowned with garlands of blue-bottles and wild poppies. The harmless play recalls to his memory the amusements of his own early days, and of his virtuous ancestors, whom he hopes at length to rejoin in a better and happier World. The sight of
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his copious harvest demonstrates to him that there is a GOD; and every return of that joyous season, bringing to his recollection the delicious cras of his past existence, inspires him with gratitude to the Great Being who has united the transient society of men by an eternal chain of blessings.

Ye flowery meadows, ye majestic, murmuring forests, ye mossy fountains, ye desert rocks, frequented by the dove alone, ye enchanting solitudes, which charm by your ineffable concerts; happy is the man who shall be permitted to unveil your hidden beauties! but still happier far is he who shall have it in his power calmly to enjoy them in the inheritance of his forefathers!

OF SOME OTHER LAWS OF NATURE HITHERTO IMPERFECTLY KNOWN.

There are, besides those which have been mentioned, some physical Laws not hitherto profoundly investigated, though we have had a glimmering of them, and made them the frequent subject of conversation. Such is the Law of attraction. It has been acknowledged in the planets, and in some metals, as in iron and the load-stone, in gold and mercury. I believe attraction to be common to all metals, and even to all fossils; but that it acts in each of them in particular circumstances, which have not hitherto been observed and ascertained. Each of the metals, perhaps, may have a disposition to turn toward different points of the Earth, as magnetic iron points toward the North, and toward places where there are mines of iron. It would probably be necessary, in order to ascertain this by experiment, that each metal should be

be armed with it's proper attraction ; this takes place, as I think, when it is united to it's contrary.

How do we know whether a needle of gold, rubbed with mercury, might not have attractive poles, as a needle of steel has when rubbed with the magnet ? Thus prepared, or in some other way adapted to it's nature, it might possibly indicate the places which contain mines of that rich metal. Perhaps it might determine the general points of direction to the East or to the West, which might serve as an indication of the Longitudes, more steadily than the variations of the magnetic needle.

If there be a point at the Pole, on which the Globe seems to revolve, there may, possibly, be one under the Equator, from which it's rotatory motion has commenced, and which may have determined it's motion of rotation. It is very remarkable, for example, that all seas are filled with univalve shell-fish, of an infinity of very different species, which all have their surrounding spirals, in an increasing progression, and in one and the same direction, that is, from left to right, like the motion of the Globe, when the mouth of the shell is turned northward, with the base to the ground. There is only a very small number of species which may be considered as exceptions, and which have, for this very reason, been denominated *unique* (singular, or extraordinary). The spirals of these circulate from right to left.

A direction so general, and exceptions so particular, in univalve shell-fish, undoubtedly have their causes in Nature, and their epochs in the unknown ages when their germs were created. It is impossible
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that they should proceed from the actual influence of the Sun, who acts on them in a thousand different aspects. Can they have been thus directed in a conformity to some general Current of the Ocean, or to some unknown attraction of the Earth, toward the North or the South, toward the East or the West? These relations will appear strange, and perhaps frivolous, to our men of Science; but every thing in Nature is a series of concatenation. A slight observation here, in many cases, leads to important discovery. A small plate of iron turning toward the North, guides a whole Navy through the deserts of the Ocean; and a reed of an unknown species, thrown on the coast of the Azores, suggested to *Christopher Columbus* the existence of a western World.

Whatever may be in this, certain it is that there exists a great number of those particular points of attraction, scattered over the Earth, such as the matrices which renovate the mines of metals, by attracting to themselves the metallic parts dispersed in the elements. It is by means of attractive matrices, that those mines are inexhaustible, as has been remarked in many places, among others in the Isle of Elba situated in the Mediterranean. This little island is entirely a mine of iron, from which had been already extracted, in the time of *Pliny*, an immense quantity of that metal, without it's being perceptible, as he tells us, that it was in the smallest degree diminished. Metals have, besides, other attractions; and if I might presume to deliver my opinion by the way, I consider these themselves as the principal matrices

trices of all fossil bodies, and as the ever active means employed by Nature for repairing the mountains and the rocks, which the action of the other elements, but especially the injudicious labours of men, have an incessant tendency to impair.

I shall here remark, on the subject of mines of gold, That they are placed, as well as those of all metals, not only on the most elevated part of Continents, but in icy mountains.

The celebrated gold mines of Peru, and of Chili, are it is well known in the Cordeliers. The gold mines of Mexico are situated in the vicinity of Mount St. Martha, which is covered with snow all the year round. The rivers of Europe, which wash down particles of gold along their shores, issue from icy mountains. The Po, in Italy, has its source in those of Piedmont. But without quitting France, we reckon ten greater or smaller rivers which roll along gold-dust, intermingled with their sands, and which have all of them their origin in mountains of ice. Such is the Rhine, from Strasburg to Philippsburg; the Rhone, in the *Païs de Gex*; the Doux, in *Franche-Comte*; which three all take their rise in the icy mountains of Switzerland. The Cèze and the Gardon descend from those of the *Cevennes*. The Ariège, in the *Païs de Foix*; the Garonne, in the vicinity of *Thoulouse*; the Salat, in the County of *Conserans*; and the rivulets of *Ferriet* and *Benagues*, all take their rise in the icy mountains of the *Pyrennées*.

This observation may be extended, I believe, to all the gold mines in the World, even to those of Africa,
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such of whose rivers as wash down the greatest quantities of gold-dust, the Senegal for instance, descend from the mountains of the Moon.

To this it may be objected, that gold was formerly found in Europe, in places where there were no icy mountains; nay, that some has been picked up on the surface of the ground, as in Brasil; and not many years ago, that there was found an ingot, or mass of several pounds weight, on the bank of a river in the district of Cinaloa, in New-Mexico. But, if I might venture to hazard a conjecture, respecting the origin of this gold, scattered about on the surface of the earth, in the ancient Continent of Europe, and especially in that of the New-World, I believe it to have proceeded from the total effusions of the ices of the mountains, which took place at the time of the Deluge; and that, as the spoils of the Ocean covered the western parts of Europe, that those of vegetable earths were spread over the eastern part of Asia, those of minerals, from the mountains, were forced along other countries, where their fragments were found, in the earlier ages, in grains, and even in larger masses.

This much is certain, that when *Christopher Columbus* discovered the Lucayo and Antilles islands, he found among those islanders abundance of gold of a base alloy, the produce of the traffic which they had carried on with the inhabitants of the Continent; but they had no mines within their own territory, notwithstanding the prejudice then entertained, and under which many labour to this day, that the Sun formed this precious metal in the earth of the

Torrid

Torrid Zone. For my own part, I find, as I have just observed, gold much more common in the vicinity of icy mountains, whatever their Latitude may be; and I conjecture from analogy, that there must be very rich mines of it in the North. It is extremely probable, that the waters of the Deluge hurled along considerable portions of that metal to the northern countries.

We read, I think, in the Book of Job the Arabian, this remarkable expression; “Gold cometh from the North.”* Certain it is, that the first commerce of India with Europe was carried on by the North, as has been clearly demonstrated by the Baron *de Strahlenberg*, a Swedish exile, after the battle of Pultowa, in Siberia, of which he has given a very sensible and accurate description. He says, that it is still possible to pursue, by evident traces, the track of the ancient Indians along the river of Petzora, which empties itself into the White Sea. On its banks, in various places, are found many of their tombs, which contain, some of them, manuscripts on silk stuffs, in the language of *Thibet*; and there are perceptible, on the rocks along its shores, characters which they

* This is not entirely of a piece with our Author's usual accuracy. It is written, indeed, in the Book of Job, chap. xxxvii. ver. 9. “*Cold* cometh out of the North;” and ver. 22. “*Fair weather* cometh out of the North:” but no where in Scripture, so far as I know, is this affirmed of *Gold*. *St. Pierre* seems to have quoted from general and indistinct recollection; happy, no doubt, to have, as he thought, a text from the Bible to support his conjecture. But, notwithstanding this defect, his reasoning is plausible, and the human testimony which he adduces respectable.

have traced upon them in a red which cannot be effaced. From this river they forced their way through the lakes, by means of leathern boats, to the Baltic ; or coasted along the northern and western shores of Europe.

This track was known to the Indians, even from the time of the ancient Romans ; for *Cornelius Nepos* relates, that a King of the Suevi made a present to *Metellus Celer* of two Indians, who had been thrown, by fires of weather, with their leathern canoe, on the coasts adjacent to the mouth of the Elbe. It is not easy to conceive what those Indians, the inhabitants of a warm country, were going in quest of, so far to the North. What use could they have made, in India, of the furs of Siberia ? It would appear they went thither in search of gold, which might then be frequently discoverable to the North at the surface of the earth.

Whatever may be in this, it is presumable that, as mines of gold are placed in the most elevated regions of the Continent, their matrices collect, in the Atmosphere, the volatilized particles of gold, which ascend thither with the fossil and aquatic emanations, conveyed by the winds from every quarter. But they exercise over men, attractions still much more powerful.

It would appear as if Nature, by burying the focuses of this rich metal under the snows, had intended to fence it with ramparts still more inaccessible than the flinty bosom of the rock, lest the undiminished ardor of human avarice should at length destroy them entirely. It has become the most powerful bond

of Society, and the perpetual object of all the labours of a life so rapidly hurrying to a close. Alas ! were Nature, at this day, to inflict condign punishment on this insatiable thirst in the Nations of Europe, for a metal so useless as a real necessary of human life, she has only to change the territory of some one of them into gold. Every other Nation would instantly flock thither, and, in a little time, exterminate it's wretched inhabitants. The Peruvians and Mexicans have had the dreadful experience of this.

There are metals not so highly prized, but much more useful, the elementary attractions of which might, perhaps, procure us very important accommodations.

The peaks of the mountains, and their lengthened crests, are filled, as we have seen, with iron or copper, intermingled with a vitreous body, of granite, or of natural crystal, which attracts the rains and the stormy clouds like so many real and electric needles. There is not a seaman but what has seen, a thousand times, those peaks, and those crests, covered with a cloudy cap, gathered round and round, and concealing them entirely from view, without once suspecting the cause of this appearance. Our Philosophers, on the other hand, deducing their conclusions merely from the inspection of charts, have taken those rocky protuberances for the wrecks of a primitive earth, without giving themselves any trouble about their effects.

They ought to have observed, that those metallic pyramids and crests, as well as most mines of iron and copper, are always to be found in elevated situations,
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and at the source of all rivers, of which they are the primitive causes by means of their attractions. Their general inattention to this subject is thus only to be accounted for ; seamen observe, and do not reason ; and the learned reason, but do not observe. Undoubtedly, had the experience of the one been united to the sagacity of the other, prodigies of discovery might have been expected.

I am persuaded that, in imitation of Nature, it might be possible for us to acquire the art of forming, by means of electric stones, artificial fountains, which should attract the rainy clouds in parched and dry situations, as chains and rods of iron attract thunder-clouds. It is true, that Princes must be at the expense of such costly and useful experiments ; but it is the way for them to immortalize their memory. The *Pharoahs*, who built the pyramids of Egypt, would not have drawn upon themselves the curses of their subjects, as *Pliny* assures us they did, for their enormous and useless labours, had they reared, amidst the sands of Upper Egypt, an electrical pyramid, which might there have formed an artificial fountain. The Arab who should resort thither at this day to quench his thirst, would still pronounce benedictions on names which, if we may believe the great Natural Historian, had already sunk into oblivion, and ceased to be mentioned in his time.

For my own part, I think that several metals might be proper for producing similar effects. An officer of high rank, in the service of the King of Prussia, informed me that having remarked vapors to be attracted by lead, he had employed it's attraction for

drying the atmosphere of a powder-magazine. This magazine was constructed under ground, in the throat of a bastion, but had been rendered of no use whatever from it's humidity. He ordered to line with a coat of lead the concave ceiling of the arch, which was before planked over where the gunpowder was deposited in barrels : the vapors of the vault collected in great drops, on the leaden roof, run off in streamlets along the fides, and left the gunpowder barrels perfectly dry.

It is to be presumed that every metal, and every fossil, has it's peculiar repulsion as well as it's attraction ; for these two Laws always go hand in hand. Contraries seek out each other.

There are, farther, a multitude of other harmonic Laws as yet undiscovered ; such are the proportions of magnitudes, and of the durations of existence, in beings vegetative and sensible, which differ exceedingly, though their nutriment and climates may be the same. Man, while yet a youth, sees the dog his companion and contemporary die of old age ; and also the sheep, which he fondled when a lamb. Though the former lived at his own table, and the other on the herbage of his meadow, neither the fidelity of the one, nor the temperance of the other, could prolong their days ; whereas animals which live only on carrion and garbage live for ages, as the crow. It is impossible to guide ourselves in prosecuting such researches any other way than by following the spirit of conformity, which is the basis of our own reason, as it is that of the reason of Nature.

By consulting this we shall find, that if such and
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such a carnivorous animal is long-lived, as the crow for instance, it is because his services and his experience are long necessary for purifying the earth, in places whose impurities are incessantly renewing, and which are frequently at great distances from each other. If, on the contrary, an innocent animal lives but a little while, it is because his flesh and his skin are necessary to Man. If the domestic dog, by his death, frequently diffuses sorrow over the children of the family, whose intimate friend and fellow-boarder he was, Nature undoubtedly intended to give them, in the loss of an animal so worthy of the affections and the regret of the heart of Man, the first experience of the privations with which human life is to be exercised.

The duration of an animal's life is sometimes proportioned to the duration of the vegetable on which it feeds. A multitude of caterpillars are born and die with the leaves by which their transitory existence is supported. There are insects whose being is limited to five hours : such is the ephemera. This species of fly, about half as large as the tip of the little finger, is produced from a fluviatic grub which is found particularly at the mouths of rivers close by the water's edge, in the mud, into which it digs in quest of subsistence. This grub lives three years, and at the termination of that period, about Midsummer-day, it is transformed, almost instantaneously, into a fly, which comes into the world at six o'clock in the evening, and dies about eleven at night. No longer space of time is necessary for copulation, and for depositing the eggs on the mud which the water has deserted.

It is very remarkable that this insect copulates, and lays her eggs, precisely at the time of the year when the tides are at the lowest, when the rivers discover at the place of their discharge the greatest part of their channel dry. Wings are then furnished, to enable her to go and deposit her eggs in places which the waters forsake, and to extend, in the capacity of a fly, the domain of her posterity, at the time when, as a worm, her territory is most contracted. I have likewise remarked, in the microscopic drawings and dissections given of this insect by the ingenious *Thevenot*, in the last part of his collection, that in her fly state, she has neither interior nor exterior organs of nutrition. They would have been entirely useless to a life of such transient duration.

Nature has made nothing in vain. It is not credible that she should have created momentary lives, and beings infinitely minute, to fill up imaginary chains of existence. The Philosophers who ascribe to her these pretended plans of universality, which are destitute of every shadow of proof, and which make her descend into the infinitely small, for purposes equally frivolous, would represent her as acting somewhat like a mother, who gives as toys to amuse her children, tiny coaches, and minute articles of household furniture, of no use in the world, but which are imitations of domestic utensils.

The aversions and the instincts of animals emanate from Laws of a superior order, which we shall never be able to penetrate into in this world ; but supposing those intimate conformities to elude our researches, they must be referred, like every other, to the general

ral conformity of beings, and especially to that of Man. There is nothing so luminous in the study of Nature, as to refer every thing that exists to the goodness of GOD, and to the demands of humanity. This method of viewing objects not only discovers to us a multitude of unknown laws, but it sets bounds to those which we do know, and which we believe to be universal.

If Nature, for example, were governed by the Laws of attraction only, according to the supposition of those who have made it the basis of so many systems, every thing in the world would be in a state of rest. Bodies, tending toward one common centre, would there accumulate, and arrange themselves round it, in the ratio of their gravity. The substances which compose the Globe, would be so much heavier as they approached nearer to the centre, and those which are at the surface, would all be reduced to a level. The basin of the Seas would be choked with the wrecks of the Land; and this magnificent architecture, formed of harmonies so various, would soon become an aquatic Globe entirely. All bodies, hurled downward by one common precipitation, would be condemned to an everlasting immobility.

On the other hand, if the Law of projection, which is employed for explaining the motions of the heavenly bodies, on the supposition that they have a tendency to fly off in the tangent of the curve which they describe; if, I say, this Law predominated, all bodies not actually adherent to the Earth would be hurled from it, like stones from a sling: our Globe itself, subjected to this Law, would fly off from the

Sun never to return. It would sometimes traverse, in it's unbounded career, the spaces of immensity, where no star would be perceptible during the course of many ages ; sometimes, swinging through regions where chance might have collected the matrices of Creation, it might pass along amidst the elementary parts of suns, aggregated by the central Laws of attraction, or scattered about in sparks and in rays, by those of projection.

But, on the supposition that these two contrary forces were combined happily enough in favour of the Globe, to fix it, with it's vortex, in a corner of the firmament, where these forces should act without destroying themselves, it would present it's Equator to the Sun with as much regularity as it describes it's annual course round him. From those two constant motions never could be produced that other motion so varied, by which it daily inclines one of it's Poles toward the Sun, till it's axis has formed, on the plane of it's annual circle, an angle of twenty-three degrees and an half ; then that other retrograde motion, by which it presents to him, with equal regularity, the opposite Pole. Far from presenting to him alternately it's Poles, in order that his fertilizing heat may by turns melt their ices, it would retain them buried in eternal night and winter, with a part of the Temperate Zones, whereas the rest of it's circumference would be burnt up by the too constant fires of the Tropics.

But if we suppose, together with those constant Laws of attraction and projection, a third variable Law, which gives to the Earth the movement that
 produces

produces the seasons, and a fourth, which gives it the diurnal motion of rotation round itself; and that no one of these Laws, so opposite, should ever surpass the others, and, at last, determine it to obey but one single impulsion; it would be impossible to affirm, that they had determined the forms and movements of the bodies which are on it's surface. First, the force of projection, or centrifugal, would not have left upon it any one detached body. On the other hand, the force of attraction, or gravity, would not have permitted the mountains to rise, and still less the metals, which are the heaviest part of them, to be placed at their summits, where they are usually found.

If we suppose that those Laws are the *ultimatum* of chance, and that they are so combined, as to form, among themselves, but one single Law; for the same reason that they make the Earth move round the Sun, and the Moon round the Earth, they ought to act in the same manner on the particular bodies which are at the surface of the Globe. We ought to see the rocks detached, the fruits separated from the trees, the animals which are not provided with claws turning round it in the air, as we see the particles which compose *Saturn's* ring turn round that Planet.

It is the gravity, they repeat, which acts only at the surface of the Globe, that hinders bodies to detach themselves from it. But if it there absorbs the other powers, Wherefore, as we have already asked, did it permit the mountains to rise? How comes it that the centrifugal force should have been able to exalt, to a prodigious height, the long ridge of the Cordeliers, while

while it has left immoveable the volatile scurf of snow, which covers them? For what reason, if the action of gravity is still universal, has it no influence on the soft bodies of animals, when, shut up in the womb of the mother or in the egg, they are in a state of fluidity? All the numerous progeny of the Earth, animals and vegetables, ought to be rounded into balls, like their mother. The weightiest parts of their bodies, at least, ought to be situated undermost, especially in those which possess self-motion; on the contrary they are frequently uppermost, and supported by limbs much lighter than the rest of the animal, as in the case of the horse and the ox. Sometimes they are between the head and the feet, as in the ostrich; or at the extremity of the body, in the head, as in the human species. Others, such as the tortoise, are flattened; others, such as reptiles, are drawn out in form of spindles; all of them, in a word, have forms infinitely varied.

Vegetables themselves, which seem entirely subjected to the action of the elements, have configurations diversified without end. But, How comes it that animals have in themselves the principles of so many motions, so entirely different? Wherefore has not gravity nailed them down to the surface of the Earth? They ought to crawl along it at most. How comes it to pass, that the Laws which regulate the course of the Stars; those Laws whose influence has, in modern times, been made to extend even to the operations of the human soul, should permit the birds to rise into the air, and fly as they please to the West, to the North, to the South, notwithstanding the
united

united powers of the attraction, and of the projection of the Globe ?

It is conformity, adaptation to use, which has regulated those Laws, and which has generalized or suspended their effects, in subordination to the necessities of sensible beings. Though Nature employs an infinity of means, she permits Man to know only the end which she has in view. Her Works are subjected to rapid dissolutions ; but she always suffers him to perceive the immortal consistency of her plans. It is on this she wishes to fix his heart and mind. She aims not at rendering Man ingenious and proud ; her object is to render him good and happy. She universally mitigates the evils which are necessary ; and universally multiplies blessings in many cases superfluous. In her harmonies, formed of contraries, she has opposed the empire of death to that of life ; but life endures for a whole age, and death only an instant. She allows Man long to enjoy the expansions of beings, so delightful to behold ; but conceals from him, with a precaution truly maternal, their transient states of dissolution.

If an animal dies, if plants are decomposed in a morass, putrid emanations, and reptiles of a disgusting form, chase us away from them. An infinite number of secondary beings are created for the purpose of hastening forward the decompositions. If cavernous mountains and rocks present appearances of ruin ; owls, birds of prey, the ferocious animals, which have made them their retreat, keep us at a distance from them. Nature drives far from us the spectacles and the ministers of destruction, and allures

us to her harmonies. She multiplies them, in subserviency to our necessities, far beyond the Laws which she seems to have prescribed to herself, and beyond the measure which we had reason to expect. It is thus that the dry and barren rocks repeat, by their echos, the murmuring sound of the waters and of the forests; and that the plane surfaces of the waters, which have neither forests nor hills, represent their colours and forms by reflecting them.

From a profusion of this unbounded benevolence of Nature it is, that the action of the Sun is multiplied wherever it was most necessary; and is mitigated in all the places where it should have been hurtful. First, the Sun is five or six days longer in our northern Hemisphere, because that Hemisphere contains the greatest part of the Continents, and is the most inhabited. His disk appears in it before he rises, and after he is set; which, added to it's twilights, considerably increases the natural length of our days. The colder that it is, the farther does the refraction of his rays extend. This is the reason that it is greater in the morning than in the evening, in Winter than in Summer, and at the beginning of Spring than at the beginning of Autumn.

When the Orb of Day has left us, during the night season, the Moon appears to reflect his light upon us, with varieties in her phases which have relations, hitherto unknown, to a great number of species of animals, and especially of fishes, which travel only in the night-time, at the epochas which she indicates to them. The farther that the Sun withdraws from one Pole, the more are his rays refracted

fracted there. But when he has entirely abandoned it, then it is that his light is supplied in a most wonderful manner. First, the Moon, by a movement altogether incomprehensible, goes to replace him there, and appears perpetually above the Horizon, without setting, as was observed in the year 1596, at Nova Zembla, by the unfortunate Dutchmen who wintered there, in the 76th degree of North Latitude.

It is in those dreadful climates that Nature multiplies her resources, in order to bestow on sensible beings the benefits of light and heat. The Heavens are there illuminated with the *aurora-borealis*, which darts up to the very zenith rays of moving light, gold-coloured, white, and red. The Poles sparkle with stars more luminous than those which appear in the rest of the firmament. The snows which cover the ground shelter part of the plants, and by their lustre dispel the darkness of night. The trees are clothed with thick mosses, which catch fire from the smallest spark; the very ground is covered with them, especially in the woods, to so great a depth, that I have oftener than once sunk, in the Summer time, up to the knees, in those of Russia: Finally, the animals, which inhabit those regions, are robed in fur to the very tip of their claws.

When the season returns for restoring heat to those climates, the Sun re-appears there a considerable time before his natural term. Thus, the Dutch mariners whom I have just mentioned, saw him to their astonishment above the Horizon of Nova Zembla, on the twenty-fourth of January, that is fifteen days sooner than they expected him. This return, so much earlier

lier than their hopes had fashioned it, filled them with joy, and disconcerted the calculations of their intelligent pilot, the unfortunate *Barents*.

It is then that the Star of Day there redoubles his heat and his light, by means of the parhelions, which like so many mirrors formed in the clouds reflect his disk upon the Earth. He calls from Africa the winds of the South, which, passing over Zara, whose sands are then violently heated by the vicinity of the Sun to their zenith, load themselves with igneous particles, and proceed to attack, like battering rams of fire, that tremendous cupola of ice which covers the extremity of our Hemisphere. It's enormous vaultage, dissolved by the heat of those winds, and loosened by their violent agitations, detaches itself in fragments as lofty as mountains; and, floating at the discretion of the Currents, which sweep them along toward the Line, they advance sometimes as far as to the 45th degree, cooling the Seas of the South, by their vast effusions. Thus the ices of the Pole communicate coolness to the heated seas of Africa, just as the burning sands of Africa transmit warm winds to dissolve the ices of the Pole.

But as cold is, in it's turn, a very great blessing in the Torrid Zone, Nature employs a thousand methods to extend the influence of it in that Zone, and to mitigate in it the heat and the light of the Sun. First, she destroys there the refractions of the Atmosphere. There is scarcely any twilight between the Tropics, to precede the rising of the Sun, and still less after his setting. When he is in the Zenith he veils himself with rainy clouds, which cool the ground,
both

both by their shade and by their showers. Besides, those clouds being frequently impregnated with thunder, the explosion of their fires dilates the superior stratum of the Atmosphere, which is icy at the height of two thousand five hundred fathom, under the Line, as is evident from the snows which perpetually cover, at that height, the summits of some of the Cordelier mountains. They cause to flow down, by their explosions and concussions, columns of that air, congealed in the superior regions of the Atmosphere, into the inferior, which are suddenly cooled by it, as we feel it to be in our own climates in Summer, immediately after a thunder storm.

The effusions of the polar ices, in like manner, cool the seas of the South ; and the polar winds frequently blow on the hottest parts of their shores. Nature has farther placed in the very heart of the Torrid Zone, and in it's vicinity, chains of icy mountains, which accelerate, and redouble the effects of the polar winds, especially along the seas, where fermentation was most to be dreaded, from the alluvions of the bodies of animals, and of vegetables, which the waters are there continually depositing. Thus, the chain of Mount Taurus, eternally covered with snow, commences in Africa, on the burning shores of Zara, and, coasting the Mediterranean, passes on into Asia, where it extends long arms, this way and that, which embrace the gulfs of the Indian Ocean. In America, in the same manner, the extensive chains of the Cordeliers of Peru and Chili, with the elevated ridges in which it crosses Brasil, cools the lengthened and burning shores of the South-Sea, and of the gulf of Mexico.

These

These elementary dispositions are only part of the resources of Nature, for mitigating the heat in warm countries. She there shades the ground with creeping vegetables and trees, in form of a parasol, some of which, such as the cocoa-tree of the Sechelles islands, and the talipot of Ceylon, have leaves from twelve to fifteen feet long, and from seven to eight feet broad. She clothes the animals of those regions with hairless skins, and colours them, in general, as well as the verdure, with dark and dusky tints, in order to diminish the reflexes of the heat and of the light. This last consideration leads me here to suggest a few reflections on the effects of colours; the little which I shall advance on this subject, will be sufficient to produce conviction, that their generations are not the effect of chance; that it is from reasons profoundly wise we find one half of them proceed, in compounding themselves, toward the light; and in their decomposition, toward darkness; and that all the harmonies of this World are produced by contraries.

Naturalists consider colours as accidents. But, if we attend to the general uses for which Nature employs them, we shall be persuaded that there is not, even on rocks, a single shade impressed without a meaning and a purpose. Let us observe, in the first place, the principal effects of the two extreme colours, white and black, with relation to the light. Experience demonstrates that, of all colours, white is that which best reflects the rays of the Sun, because it sends them back without any tint, as pure as it receives them; and that black, on the contrary, is the least adapted to their reflection, because it absorbs them.

them. This is the reason why gardeners whiten the walls against which their espaliers are planted, in order to accelerate the maturity of their fruits, by the reverberation of the Sun's rays; and why opticians blacken the walls of the *camera-obscura*, that their reflexes may not disturb the luminous picture on the tablet.

Nature of consequence frequently employs to the North the white colour, in order to increase the light and heat of the Sun. Most of the lands there are whitish, or of a clear gray. The rocks and sands of northern regions are filled with mica and specular particles. Farther, the whiteness of the snows which cover them in Winter, and the vitreous and crystalline particles of their ices, are exceedingly adapted to mitigate the action of the cold, by reflecting the light and heat in the most advantageous manner. The trunks of the birch trees, of which the greatest part of their forests consist, are covered with a bark as white as paper. Nay, in some places, the earth is clothed with a vegetation completely white.

"In the eastern part," says an intelligent Swede, "of the lofty mountains which separate Sweden from Norway, exposed to the utmost rigor of the cold, there is a very thick forest, and singular in this respect, that the pine which grows there is rendered black, by a species of filamentous lichen, which hangs upon it in great abundance; whereas the ground is covered every where around with a white lichen, which in lustre rivals the snow."*

* Extract from the Natural History of the rein-deer, by Charles-Frederick Hoffberg, translated by M. le Chevalier de Keralio.

Nature there bestows the same colour on most animals, such as the white bear, the wolf, the partridge, the hare, the ermine ; others perceptibly whiten to a certain degree in Winter, such as foxes and squirrels, which are reddish in Summer, and light gray in Winter. Nay if we consider the filiform figure of their hair, it's varnish and transparency, we shall be sensible that it is contrived in the most proper manner for reflecting and refracting the rays of light. We ought not to imagine this whiteness as a degeneration, or enfeebling of the animal, as Naturalists have done with respect to the human hair, which whitens in old age, as they tell us, from a failure of radical moisture; for nothing can be of a closer contexture than most of those furs, nor any thing more vigorous than the animals which are arrayed in them. The white-bear is one of the strongest and most formidable of animals in the world ; it frequently requires several musket-shot to bring him down.

Nature, on the contrary, has tinged with red, with blue, with dusky, and black tints, the soil, the vegetables, the animals, nay even the men, of the Torrid Zone, for the purpose of there absorbing the fires of the burning Atmosphere with which they are surrounded. The lands, and the sands of the greatest part of Africa, situated between the Tropics, are of a reddish brown, and the rocks are of a black hue. The Islands of France and of Bourbon, which are on the border of that Zone, are, in general, of the same dark complexion. I have seen there chickens and paroquets, not only whose plumage, but the skin itself, was dyed black. I have likewise seen in those islands,

fishes

fishes entirely black, and especially among the species which live near the surface of the water, over the shallows, such as the old-woman and the thornback.

As animals whiten in Winter, toward the North, in proportion as the Sun withdraws from them, those of the South assume dark and dusky tints, in proportion as the Sun approaches. When he is in the Zenith, the sparrows of the tropical countries have breast-plates, and the plumage of the head, completely red. There are birds in those regions, which change their colour three times every year, having, if I may use the expression, one dress for Spring, another for Summer, and a third for Winter, according as the Sun is in the Line, in the Tropic of Cancer, or in that of Capricorn.*

* The white colour, accordingly, increases the effect of the rays of the Sun, and the black weakens it. The inhabitants of Malta whiten the inside of their apartments, in order, as they allege, to render the scorpions perceptible, which are very common in that island. In doing this, if I am not mistaken, they commit two errors; the first, in misapprehending the colour: for the scorpions, which there are gray, would appear still better on a dark ground; the second, and one of much greater importance, is their increasing to such a degree the reverberation of the light, that the eye-sight is sensibly affected by it. To this cause I principally ascribe the disorder of the eye so frequently complained of by those islanders. Our trades-people wear white hats, in Summer, when in the country, and complain of head-achs. All these evils arise from neglecting to study Nature. In the Isle of France they employ, for wainscoting, the wood of the country, which in time becomes entirely black; but this tint is too gloomy. It seems as if Nature had foreseen, in this respect, the services which Man was to derive from the interior of trees: their timber is brown in most of those of hot countries, and white in those of the northern regions, such as the fir and the birch.

This too is very remarkable, and of consequential importance to the use which Nature makes of these colours, to the North, and to the South; namely, that in all countries the whitest part of an animal is the belly, because more heat is wanted there for promoting digestion, and for carrying on the other animal functions: and, on the contrary, the head is universally most strongly coloured, especially in those of hot countries, because in the animal economy that part stands most in need of being kept cool.

It cannot be maintained that the bellies of animals preserve their whiteness, because that part of the body is sheltered from the Sun; and that their heads assume strong colouring from being more exposed to his influence. It might appear from reasons of analogy that the natural effect of light ought to be, to invest with it's lustre all the objects which it touches; and that conformably to this the soil, the vegetables, and the animals of the Torrid Zone ought to be white; and that darkness, on the contrary, acting for several months together on the Poles, ought to clothe every object within those regions in robes of mourning. But Nature subjects not herself to mechanical Laws. Whatever may be the physical effect of the presence of the Sun, or of his absence, she has contrived toward the North, to impose very black spots on the whitest bodies, and, to the South, white spots on the darkest bodies. She has blackened the tip of the tail of the Siberian ermine, in order that these little animals which are white all over, as they march along the snow, where they scarcely leave any traces of their footsteps, may be enabled to distinguish

guish each other when proceeding in a train, in the luminous reflexes of the long nights of the North.

Perhaps too this blackness, opposed to the white, may be one of those decided characteristics with which she has marked beasts of prey ; such as the extremity of the black snout and the black paws of the white bear. The ermine is a species of weasel. There are likewise in the North foxes completely black ; but they are indemnified for the influence of the white colour, by the warmest and thickest of furs ; it is the most valuable of all those of the North. Besides, this species of foxes is very rare, even in those countries. Nature has perhaps clothed them in black, because they live in subterraneous places, in the midst of warm sands, or in the vicinity of certain volcanos, or for some other reason to me unknown, but corresponding to their natural calls. It is thus she has clothed in white the pailleur, or bird of the Tropics, because this fowl, which flies at a prodigious elevation above the Sea, passes part of it's life in the vicinity of a frozen Atmosphere. These exceptions by no means destroy the general adaptation of those two colours ; on the contrary they confirm it, seeing it is employed by Nature for diminishing, or increasing, the heat of the animal, in conformity to the temperature of the place where it lives.

I now leave it to Naturalists to explain how it comes to pass that cold should cause to vegetate the hair of animals in the North ; and why the heat should shorten, or cause to fall off, the hair of animals to the South ; in contradiction to all the Laws

of systematic, nay, of experimental Physics; for we are assured from our personal experience that Winter retards the growth of the human hair and beard, and that the Summer accelerates it.

I believe I have a glimpse of a Law very different from the Law of analogies, which we so commonly assign to Nature, because it allies itself to our weakness by affording us a pretence to explain every thing, with the assistance of a small number of principles. This Law, infinitely varied in it's means, is that of *compensations*.* It is a consequence from the universal

* In reflecting on these compensations, which are very numerous, and among others on those of the light of the Sun, which embrowns bodies in order to weaken the reflexes of them, it has suggested itself to my thoughts, that fire must in like manner produce matter the best adapted to diminish it's own activity. And of this I have in fact made frequent proof, by throwing a little ashes on the flame blazing on my hearth. By this means I have been able to quench it suddenly almost without smoke. I recollect to this purpose having some time ago seen, in one of our sea-ports, a great caldron full of pitch catch fire, which they were heating for careening a ship. Inexperienced persons immediately attempted to extinguish the flame by throwing water upon it; but the boiling and inflamed matter spread only the more violently, in torrents of fire, over the brim of the caldron; I did not think a single ladle-full would be left within the vessel, when an old seaman run up, and instantly brought it down by throwing upon it a few shovels-full of ashes. I believe therefore that by uniting this application with that of water, great assistance might be derived in case of conflagrations; for the ashes would not only deaden the flame, without exciting that dreadful smoke which arises from it, as soon as the engines begin to play, but when once thoroughly moistened, they would retard the evaporation of the water, which is almost instantaneous when the fire has made a considerable progress. It would afford me inexpressible satisfaction

verfal Law, or the mutual adaptation of things, and a fequel of the union of contraries, whereof the harmonies of the Universe are compofed. Thus it frequently happens that effects fo far from being the results of caufes, are oppofite to them. For example, it has pleafed Nature to clothe in white feveral birds, the inhabitants of warm regions, fuch as the heron of the Antilles, and the paroquet of the Mollucas, called *cacatoës* ; but ſhe has beſtowed, at the ſame time, on their plumage a diſpoſition which weakens the reflection of it.

Farther, it is very remarkable that ſhe has furniſhed the heads of thoſe birds with tufts and plumes of feathers, which overſhadow them, becauſe, as was formerly obſerved, the head is that part of the body, which in the animal economy ſtands moſt in need of being kept cool. Such is our creſted hen, which comes originally from Numidia. Nay I do not believe that there are to be found in any but ſouthern countries, birds with tufted heads. If there be ſome toward the North, as the lapwing, they make their appearance there only in Summer. Moſt of thoſe of the North, on the contrary, have the belly and the feet clothed with tippets formed of down ſimilar to the fineſt of wool.

This likewise is farther worthy of remark, reſpecting the white birds and quadrupeds of the South, which live in a hot Atmoſphere, namely, if I am not miſtaken, that the ſkin of them all is black ;

tion ſhould this obſervation merit the attention of thoſe who have ability to give it, from their experience, ſagacity and influence, all the utility of which it is ſuſceptible.

which is sufficient to counterbalance the reflection of the colour of their exterior drefs. *Robert Knox*, in fpeaking of certain white quadrupeds of the Ifland of Ceylon, fays, that their fkin is entirely black. I myfelf recollect to have feen, at Port l'Orient, a *cacatoës*, whofe ftomach had been ftripped of the feathers, and difplayed a fkin as black as that of a Negro. When this white bird, with his black beak, and black and naked breaft, erected his plume, and clapped his wings, he had the complete air of an Indian King, with his crown and mantle of feathers.

This Law of compensations employs, therefore, means endlefsly varied, which contradict moft of the Laws which we have laid down in Phyfics; but this Law muft itfelf be fubjected to that of general accommodation or conformity; without which, were we to attempt to render it univerfal, it would involve us in the common error. It has given rife, in Geometry, to feveral axioms extremely doubtful, though of great celebrity, fuch as the following; *the action is equal to the re-action*; and this other, which is a confequence from it, *the angle of reflection is equal to the angle of incidence*. I fhall not flop to demonftrate in how many cafes thefe axioms are erroneous; how many actions in Nature are without re-actions; how many angles of reflection are deranged by the very planes of incidence. It is fufficient for me at prefent to repeat what I have already, oftener than once, advanced, namely, that the weaknefs of the human mind, and the vanity of our education, are inceffantly prompting us to generalize. This mode of proceeding is the fource of all our errors, and per-
haps

haps of all our vices. Nature bestows on every being that which is adapted to it, in the most perfect conformity, according to the Latitude for which it is destined; and when the temperature of that Latitude is affected by change of season, she is pleased to vary likewise the adaptations. Some of these adaptations are accordingly immutable, and others variable.

Nature frequently employs contrary means for producing the same effect. She makes glass with fire; she makes it too with water, crystal for instance: farther, she produces it from animal-organization, such as certain transparent shell-fish. She forms the diamond by a process to us utterly unknown. Conclude now, because a body has been vitrified, it must certainly be by the effect of fire, and rear on this perception the system of the Universe! The utmost that we are capable of doing is to catch some harmonic instants in the existence of beings. That which is vitrifiable becomes calcareous, and what is calcareous changes into glass, by the action of the same fire. Deduce then, from these simple modifications of the fossil kingdom, invariable characters for determining the general classes of it!

On the other hand, Nature frequently employs also the same means for producing effects directly contrary. For example, we have seen that in order to increase the heat over the lands of the North, and to mitigate it over those of the South, she made use of opposite colours; she produces in both the same effects, by covering the face of the one and of the other with rocks. These rocks are essentially necessary
to

to vegetation. I have frequently remarked in those of Finland stripes of verdure skirting their bases to the South; and in those of the Isle of France I have seen such verdant stripes on the side averted from the Sun.

The same observations may be made in our own climate. In Summer, when every thing is parched, we frequently find green herbage under walls which have a northerly aspect; it disappears in Winter; but then we find it replaced in front of eminences which face southward.

We have already remarked that the Icy Zones, and the Torrid Zone, contain the greatest quantity of waters, the evaporation of which equally tempers the violence of the heat and of the cold, with this difference, that the greatest lakes are toward the Poles, and the greatest rivers toward the Line. There are, it is admitted, some lakes in the interior of Africa and America; but they are placed in elevated atmospheres, in the centre of mountains, where they are not liable to corruption from the action of the heat; but the plains and low grounds are washed by the greatest currents of living water that are in the World, such as the Zaire, the Senegal, the Nile, the Mississippi, the Orinoko, the Amazon, and others.

Nature proposes to herself, universally, only the accommodation of beings possessed of sensibility. This remark is all-important in the study of her Works; otherwise, from the similitude of the means which she employs, or the exceptions from them, we might be tempted to doubt of the consistency of her Laws, instead of ascribing the majestic obscurity
which

which pervades them to the multiplicity of her resources, and to the profundity of our own ignorance.

This Law of adaptation and conformity has been the source of all our discoveries. It was this which waisted *Christopher Columbus* to America; because, as *Herrera* tells us,* he thought, contrary to the opinion of the Ancients, that the whole five Zones must be inhabited, as GOD had not formed the Earth to be a desert. It is this Law which regulates our ideas respecting the objects absolutely beyond the reach of our examination. By means of it, though we are ignorant whether there may be men in the Planets, we are assured there must be eyes, because there is light. It is this which has awakened a sense of Justice in the heart of every man, and which informs him that there is another order of things after this life is at an end. This Law in a word is the most irresistible proof of the existence of GOD; for amidst such a multitude of adaptations, so ingenious that our passions themselves, restless as they are, never could have devised any thing similar; and so numerous, that every day is presenting to us some that have all the merit of novelty, the first of all, which is the DEITY, must undoubtedly exist, as he is the general conformity of all particular conformities.

It is this, above all, whose existence we endeavour even involuntarily every where to trace, and to assure ourselves of it in every possible manner. And this explains to us the reason why the most splendid and comprehensive collections in Natural History, Galleries of the choicest master-pieces in Painting, Gar-

* *Herrera's History of the West-Indies.* Book i. chap. 2.

dens filled with the rarest and most curious plants, Libraries stored with the most valuable and best written books; in a word, every thing that presents to us the most marvellous relations of Nature, after having raised us to an extasy of admiration, conclude by superinducing languor and fatigue. We frequently prefer to all these a rustic mountain, a rugged rock, some wild solitude, which might present to us relations newer, and still more direct.

How often, on coming out of the King's magnificent Cabinet of Natural History, do we stop mechanically to look at a gardener digging a hole in the field with his spade, or at a carpenter hewing a piece of timber with his hatchet? It looks as if we expected to see some new harmony start out of the bosom of the Earth, or burst from the side of a lump of oak. We set no value on those which we have just been enjoying, unless they lead us forward to others which as yet we do not know. But were the complete History given us of the stars of the Firmament, and of the invisible Planets which encircle them, we should perceive in them a multitude of ineffable plans of intelligence and goodness, after which the heart would continue fondly to sigh: its last and only end is the DIVINITY himself.

STUDY ELEVENTH.

APPLICATION OF SOME GENERAL LAWS OF NATURE
TO PLANTS.

BEFORE I proceed to speak of plants, I must be indulged in making a few reflections on the language of Botany.

We are still so young in the study of Nature, that our languages are deficient in terms to express her most common harmonies. This is so true, that however exact the description of plants may be, and compiled by Botanists of whatever ability, it is impossible to distinguish them in the fields, unless you have previously seen them in Nature, or at least in a herbary. Persons who think they have made the greatest proficiency in Botany, need only attempt to draw on paper a plant which they have never seen, after the description of the most accurate Master, to be convinced how widely the copy deviates from the original.

Men of genius have, nevertheless, taken inexpressible pains to assign characteristic names to the different parts of plants. They have even borrowed most of those names from the Greek, a language of singular energy of expression. From this has resulted another incon-

inconvenience ; it is, that those names, being for the most part compounds, cannot be rendered into modern language ; and for this reason it is that a great part of the Works of *Linnaeus* are absolutely incapable of translation. These learned and mysterious expressions, no doubt, diffuse a venerable air over the study of Botany ; but Nature has no need of such resources of human art to attract our respect. The sublimity of her Laws can easily dispense with the emphasis and obscurity of our expressions. The more light a man carries in his own bosom, the more wonderful he esteems it to be.

After all, most of those foreign names, employed particularly by the herd of Botanists, do not so much as express the most common characters of vegetables. They frequently make use, for example, of such vague expressions as these, *suavè rubente*, *suavè olente*, of an agreeable red, sweet-smelling, in order to characterize flowers ; without expressing the shade of red, or the species of perfume. They are still more embarrassed when they wish to convey the dusky colours of the stem, of the root, or of the fruit : *atro-rubente*, say they, *fusco-nigrescente*, of a dark red, of a dusky brown. As to the forms of vegetables, the case is still worse, though they have fabricated terms compounded of four or five Greek words to describe them.

J. J. Rousseau communicated to me, one day, a set of characters somewhat resembling the algebraic, which he had invented for the purpose of briefly expressing the colours and forms of vegetables. Some of them represented the forms of the flowers ; others, those of the leaves ; others, those of the fruits. Some resembled

resembled a heart, some were triangular, some of the lozenge shape. He did not employ above nine or ten of those signs, to compose the expression of one plant. Some he placed above others, with cyphers which indicated the genera and the species of the plant, so that you would have taken them for the terms of an algebraic formula. However ingenious and expeditious this method might be, he informed me that he had given it up, because it presented to him skeletons only.

This sentiment came with peculiar grace from a man whose taste was equal to his genius, and may suggest some reflections to those who are for giving abridgments of every thing, especially of the Works of Nature. The idea of *John-James*, however, well deserves to be followed up, should it only serve to produce, one day, an alphabet proper to express the language of Nature. All that seems requisite is the introduction of accents, to convey the shades of colours, and all the modifications of flavours, perfumes, and forms. Even then, those characters could not be delineated with perfect precision, unless the qualities of each vegetable were first exactly determined by words: otherwise the language of Botanists, which is now accused of speaking only to the ear, would make itself intelligible only to the eye.

This is what I have to propose respecting an object so highly interesting, and which will perfectly coalesce with the general principles which we shall afterwards lay down. The little which I may advance upon the subject will serve to supply expression, not only in Botany, and in the study of the other natural Sciences,
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but in all the Arts, where we find ourselves puzzled every instant, for want of terms to convey the shades and forms of objects.

Though we have only the term *white*, whereby to express the colour which bears that name, Nature presents to us a great variety of sorts of it. Painting, with respect to this article, is as barren as language.

I have been told of a famous Painter of Italy, who upon a certain occasion found himself very much embarrassed how to represent, in one of his pieces, three figures dressed in white. The point in question was, to give effect to those figures, to be thus uniformly dressed, and to draw out different shades of the most simple, and the least compounded, of all colours. He was going to abandon his object as a thing impossible, when, happening to pass through a corn-market, he perceived the effect which he was in quest of. It was a group formed by three millers, one of whom was under a tree, the second in the half tint of the shade of that tree, and the third exposed to the rays of the Sun: so that though the drapery of all the three was white, they were completely detached from each other. He introduced a tree, therefore, amidst the three personages of his picture, and, by illuminating one of them with the rays of the Sun, and throwing over the other two different tints of shade, he was enabled to exhibit a drapery of three several casts of white.

This, however, was rather to elude the difficulty, than to resolve it. And this is, in fact, what Painters do in similar cases. They diversify their whites by shades, half-tints, and reflexes; but these whites
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are not pure ; they are always disturbed with yellow, blue, green, or gray. Nature employs several species of white, without diminishing the purity of it, by dotting, rumpling, radiating, varnishing it, and in various other ways.....Thus, the whites of the lily, of the daisy, of the lily-of-the-valley, of the narcissus, of the anemone-nemorosa, of the hyacinth, are all different from each other. The white of the daisy has something of that of a shepherdesses' cornet ; that of the hyacinth has a resemblance of ivory ; and that of the lily, half transparent and crystalline, resembles the paste of porcelain. I believe, therefore, that all the whites produced by Nature, or by Art, might be referred to those of the petals of our flowers. We should thus have, in vegetables, a scale of shades of the purest white.

We might, in like manner, procure all the pure and imaginable shades of yellow, of red, and of blue, from the flowers of the jonquil, of the saffron, of the butter-flower of the meadow, of the rose, of the poppy, of the blue-bottle of the corn field, of the larkspur, and so on. We might find, in the same manner, among our common flowers, all the compound shades, such as those of the impurpled violet and foxglove, which are formed of the various harmonies of red and blue. The single compound colour, made up of blue and yellow, which constitutes the green of our herbage, is so varied in every plain, that each plant, I may venture to affirm, has it's peculiar shade of that colour. I can have no doubt that Nature has displayed, in equal variety, the other co-

lours of her palette, in the bosom of flowers, or on the surface of fruits.

In performing this, she sometimes employs very different tints, without confounding them ; but she lays them on one above another, so that they form the doves-neck : such is the beautiful shag which garnishes the corolla of the anemone ; in other cases, she glazes their surface, as certain mosses with a green ground, which are glazed over with purple ; she velvets others, such as the pansy ; she powders over some fruits with a delicately fine flour, such as the purple plumb, distinguished by the addition of *de Monsieur* ; or invests them with a light brown to soften their vermilion, as the peach ; or smooths their skin, and gives the brightest lustre to their colours, as to the red of the apple of Calleville.

What embarrasses Naturalists the most, in denominating colours, is to find distinctive epithets for such as are dusky ; or rather, this gives them no manner of concern : for they evade the difficulty by the vague and indecisive expressions, of blackish, gray, ash-coloured, brown, which they convey, it is true, in Greek and Latin words. But those words frequently answer no purpose, except to confound their images, by giving no representation whatever ; for what, in good earnest, is meant by these, and such like epithets, *atro-purpurante*, *fusco-nigrescente*, which they employ so frequently ?

It is possible to make thousands of tints widely different from each other, to which such general expressions might be applied. As those dark shades, in
truth,

truth, are much compounded, it is exceedingly difficult to characterize them by the phraseology of our common vocabularies. But this might be easily and effectually accomplished, by referring them to the different colours of our domestic vegetables. I have remarked in the barks of our trees and shrubbery, in the capsules and shells of their fruits, as well as in the dead leaves, an incredible variety of those sad and gloomy shades, from yellow down to black, with all the intermixtures and accidents of the other colours. Thus, instead of saying in Latin, a yellow inclining to black, or an ash-coloured tint, in order to determine some particular shade of colour in a production of Art, or of Nature, we might say a yellow of the colour of a dried walnut, or a gray like the bark of a beech-tree.

Those expressions would be so much the more exact, that Nature invariably employs such tints in vegetables, as determining characters and indications of maturity, of vigor, or of decay; and that our peasantry can distinguish the different species of wood in the forests by the inspection of their bark simply. Thus, not Botany alone, but all the Arts might find in vegetables, an inexhaustible dictionary of unvarying colours, which would not be embarrassed with barbarous and technical compound words, but which would continually present new images. Our books of Science would thence derive much pleasing vivacity, from being embellished by comparisons and expressions borrowed from the loveliest kingdom of Nature.

The great Poets of Antiquity carefully availed
 G 2 themselves

themselves of this, by referring most of the events of human life to some appearance of the vegetable kingdom. Thus *Homer* compares the fleeting generations of feeble mortals to the leaves which drop from the trees of the forest, at the end of Autumn ; the freshness of beauty to that of the rose ; and the paleness which overspreads the countenance of a young man wounded to death in battle, as well as the attitude of his drooping head, to the colour and the fading of a lily, whose root has been torn up by the plough. But we satisfy ourselves with repeating the expressions of men of genius, without daring to tread in their footsteps. This however is not the worst, for most Naturalists consider the colours themselves of vegetables as accidents simply. We shall presently see under what a grievous mistake they labour, and how widely they have deviated from the sublime plans of Nature, by persisting in a prosecution of their mechanical and systematic methods.

It is possible, in like manner, to trace an approximation of flavours and smells of every species, and of every country, to those of the plants of our gardens and of our fields. The ranunculus of the meadow has the acridity of the Java-pepper. The root of the caryophyllata, or holy-thistle, and the flower of the pink, smell like the clove of Amboyna. As to compound flavours and smells, they may be referred to such as are simple, the elements of which Nature has scattered over all climates, and which she has united in the class of vegetables. I know a species of morel, used as food by the Indians, which when boiled has the taste of beef. They call it *brette*.
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There is a species of the cranes-bill, the leaf of which resembles in smell a roasted leg of mutton. The muscari, a species of small hyacinth, which grows among shrubbery early in the Spring, smells very strongly of the plumb. It's small monopetalous flowers, of a delicate blue colour, and with lips or incisions, have likewise the form of that fruit.

By approximations such as these, the English Navigator *Dampier*, and Father *du Tertre*, have given us, as far as I can judge, the most accurate notions of the fruits and flowers which grow between the Tropics, by referring them to the fruits and flowers of our own climates. *Dampier*, for example, in order to describe the banana, compares it, when stripped of it's thick five-panneled skin, to a large sausage; it's substance and colour to fresh butter in Winter; it's taste, a mixture of apple and of the pear known by the name of the good-christian, which melts in the mouth like marmalade. When this traveller describes some good fruit of the Indies, he sets your mouth a-watering. He possesses a naturally sound understanding, superior at once to the methodical trammels of the learned, and to the prejudices of the vulgar. He maintains, for instance, and with truth on his side, in opposition to the opinion of most navigators, that the plantain, or banana, is the king of fruits, without excepting even the cocoa. He informs us, that this is likewise the opinion of the Spaniards, and that multitudes of families live, between the Tropics, on this pleasant, wholesome, and nourishing fruit, which lasts all the year round, and stands in no need of any of the arts of cookery.

Father *du Tertre* is not less happy, nor less accurate, in his botanical descriptions. These two travellers give you, at a single stroke, by means of trivial similitudes, a precise idea of a foreign vegetable, which you would search for to no purpose in the Greek names of our first-rate Botanists. This mode of describing Nature, by ordinary images and sensations, is held in contempt by the learned; but I consider it as the only one capable of exhibiting pictures, that have a resemblance, and as the true character of genius. With such assistance you will be enabled to paint every natural object, and may dispense with methods and systems; without it you will only coin phrases.

Let us now suggest a few thoughts respecting the form of natural objects. It is here that the language of Botany, and even those of the other Arts, are peculiarly barren. Geometry, whose particular object this is, has invented scarcely more than a dozen regular curves, which are known to only a small number of the learned; and Nature employs an infinite multitude of them in the forms of flowers alone. Some of the uses of these we shall presently indicate. Not that I mean to make of a study prolific of delight, a sublime Science, worthy only of the genius of a *Newton*. As Nature has introduced, in my opinion, not only the colours, the flavours, and the perfumes, but likewise every model of form into the leaves, the flowers, and the fruits of all climates, whether in trees, in herbage, or in mosses; the vegetable forms of other parts of the World, might be referred to those of our own country which are most familiar to us. Such
approxi-

approximations would be much more intelligible than the Greek compound words, and would manifest new relations in the different classes of the same kingdom.

They would be no less necessary for expressing the aggregations of the flowers on their stems, of the stems round the root, and the groups of young plants around the parent-plant. It may be affirmed, that the names of most of these vegetable aggregations and dispositions are yet to be invented; the greatest Masters not having been fortunate in characterizing them, or, to speak without reserve, not having made it any part of their study. For example, when *Tournefort* * speaks, in his Voyage to the Levant, of a heliotrope of the Isle of Naxos, which he characterizes thus, *heliotropum humifusum, flore minimo, semine magno*, the creeping heliotrope, with a very small flower and a large seed; he says that it has it's flowers disposed in form of an ear of corn, going off in a scorpion's tail. There are two mistakes in this description; for the flowers of this heliotrope, similar, from their aggregation, to the flowers of the heliotrope of our climates, and to that of Peru, are not disposed in form of an ear of corn, for they are arranged on a horizontal stem, and only on one side; and they bend downward, like the tail of a snail, and not upward, like the tail of a scorpion.

The same inaccuracy, with respect of image, is to be found in the description which he gives us of the *stachis Cretica latifolia*, the broad-leaved stachis of Crete: it's flowers, says he, are disposed in rings. No one can imagine he intends to convey this meaning, that they are disposed like the divisions of the

* *Tournefort's Voyage to the Levant*, vol. i.

king of the chess-board. Under this form, however, they are represented in the drawing of *Aubriet*, his designer. I do not know any botanic expression which conveys this character of spherical aggregations in separate stories of alternate swellings and sinkings, and terminating in a pyramid. *Barbeau du Bourg*, who possesses much imagination with little exactness, calls this form verticillate, for what reason I know not. If it is from the Latin word *vertex*, head or summit, because these flowers, thus aggregated, form several summits, this denomination would be more applicable to several other plants; and besides, it does not express the swellings, the sinkings, and the progressive diminution of the flowers of the stachis.

Tournefort derives it from the Latin word *verticillus*; that is, says he, a small weight perforated circularly to receive the end of a spindle, in order to make it whirl with greater facility. This is going a great way, in quest of a very imperfect similitude to an utensil by no means generally known. In saying this, however, I would not be considered as failing in the respect which is due to such a man as *Tournefort*, who first cleared for us the botanic path, and was besides a person of profound erudition. But from this carelessness of the great Masters, we may form a judgment of the vague, inaccurate, and incoherent expressions which fill the vocabulary of Botany, and diffuse obscurity over its descriptions.

After all, I shall be asked, How would you characterize the aggregation of the flowers of the two plants which have just been mentioned? By referring them

them to aggregations fimilar to thofe of the plants of our own climates. In this there can be no difficulty : thus, for example, we might refer the affemblage of the flowers of the Grecian heliotrope, to that of the French or Peruvian heliotrope : and that of the flowers of the Cretan ftachis, to that of the flowers of the horehound, or of the pennyroyal. To this might afterwards be added the differences in colour, fmell, favour, which diverfify the fpecies of it. There is no occafion to compound foreign terms to defcribe forms which are familiar to us. Nay, I defy any one to convey by Greek and Latin words, and with the moft learned turn of periphrasis, the fimple colour of the bark of a tree. But if you tell me it refembles that of an oak ; I have the fhade of it at once.

Thefe approximations of plants have this farther utility, that they prefent us with the combined whole of an unknown object, without which we can form no determinate idea of it. This is one of the defects of Botany, it exhibits the characters of vegetables only in fucceffion ; it does not collect them, it decompounds them. It refers them indeed to a claffical order, but not to an individual order. This however is the only one which the human mind permits us to catch. We love order, becaufe we are feeble, and becaufe the leaft confufion difturbs us ; now, there is no order which we can adopt more eafily than that which approaches to an order which is familiar to us, and which Nature is every where prefenting. Try to defcribe a man feature by feature, limb by limb ; be ever fo exact, yet you never will be able to give me his portrait : but if you refer him to fome known perfonage ;

personage; if you tell me, for example, that he is of the make and mien of a Don Quixote; or with a nose like that of St. *Charles Baromeo*, and so on, and you paint me his picture in four words. It is to the whole of an object that the ignorant, an epithet which includes the greatest part of Mankind, attach themselves in the first instance, in order to acquire the knowledge of it.

It would, therefore, be of essential importance to have, in Botany, an alphabet of colours, flavours, smells, forms, and aggregations, derived from our most common plants. Those elementary characters would enable us to express ourselves exactly in all the parts of Natural History, and to present to ourselves relations equally new and curious.

In hope that persons of superior intelligence may hereafter be induced to take up the subject, I proceed to the discussion of it with what ability I have, notwithstanding the embarrassment of language.

When we see a multitude of plants, of different forms, vegetate on the same soil, there is a disposition to believe that those of the same climate grow indifferently every where. But those only which are produced in places particularly assigned to them by Nature, attain there all the perfection of which they are susceptible. The same thing holds good with respect to animals. Goats are sometimes reared in marshy places, and ducks on the mountains; but the goat never will acquire, in Holland, the beauty of that which Nature clothes with silk on the rocks of Angora; nor will the duck of Angora ever attain the
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stature and the colours of those which are to be found in the canals of Holland.

If we throw a simple glance on plants, we shall perceive that they have relations to the elements which promote their growth ; that they have relations to each other, from the groups which they contribute to form ; that they have relations to the animals which derive nourishment from them ; and, finally, to Man, who is the centre of all the Works of Creation. To these relations I give the name of harmonies, and I divide them into elementary, into vegetable, into animal, and into human.

By proposing this division, I shall reduce to something like order the disquisition on which I am going to enter. It cannot be supposed that I should examine them in detail : those of a single species would furnish speculations which the application of a whole life could not exhaust ; but I shall unfold enough of their general harmonies to produce conviction, that an infinite Intelligence reigns in this amiable part of Creation, as in the rest of the Universe.

We shall thus make application of the Laws which have been previously established, and shall take a glimpse of a multitude of others, equally worthy of research, and equally calculated to excite admiration. Reader, be not astonished at either their number, or their extent. Let this great truth be deeply impressed on thy heart : *GOD has made nothing in vain!* A scholar, with his systems and methods, finds himself stopped short in Nature every step he takes ; while furnished with this as a key, the ignorant rustic is able to unlock every door of knowledge.

ELEMENTARY HARMONIES OF PLANTS.

Plants have as many principal parts as there are elements with which they keep up a relation. By their flowers, they stand related to the Sun, which fecundates their seeds, and carries them on to maturity ; by their leaves, they are related to the waters, which bedew them ; by their stems, to the winds which agitate them ; by their roots, with the ground which sustains them ; and by their grains, with their situations adapted to their growth and increase. Not that their principal parts have no indirect relations besides to the other elements, but it will be sufficient for our purpose to dwell on such as are immediate.

*Elementary Harmonies of Plants with the Sun, by the
Flowers.*

Though Botanists may have made great and laborious researches respecting plants, they have paid no attention to any of those relations. Fettered by their systems, they have attached themselves to the consideration of them particularly on the side of the flowers : and have arranged them in the same class, wherever they found these external resemblances, without so much as enquiring what might be the particular use of the florification. They have, indeed, distinguished in it the stamina, the antheræ, and the stigmata, for the fecundation of the fruit, but, excepting this, and some others, which respect the interior organization, they have neglected, or misunderstood, the relations which the whole plant has with the rest of Nature.

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This partial division has led them into the strangest confusion ; for, by considering the flowers as the principal characters of vegetation, and by comprehending in the same class those which were similar, they have united plants entirely foreign to each other, and have separated, on the contrary, many which are evidently of the same genus. Such is, in the first case, the fullers-thistle, called *dipsacus*, which they class with the scabious, because of the resemblance of some parts of it's flower ; though it presents in it's branches, it's leaves, it's smell, it's seed, it's prickles, and the rest of it's qualities, a real thistle : and such is, in the second, the great chestnut of India, which they exclude from the class of chestnut-trees, because it has different flowers. To class plants from the flowers, that is, from the parts of their fecundation, is the same thing with classing animals from those of generation.

However, though they have referred the character of a plant to it's flower, they misunderstand the use of it's most shining part, which is that of the corolla. They call that the corolla, which is, in common language, denominated the leaves of a flower. It is a Latin word, signifying a little crown, from the disposition of the leaves, in many species, in the form of coronets, and they have given the name of petals to the divisions of that crown. Some, in truth, have acknowledged it to be properly adapted for covering the parts of fecundation before the expansion of the flower ; but it's calix is much better adapted to this purpose, from it's thickness, from it's beards, and sometimes from the prickles with which it is invested.

Besides,

Besides, when the corolla leaves the stamina exposed, and when it continues fully blown for whole weeks, it must of necessity be answering some other purpose ; for Nature does nothing in vain.

The corolla seems intended to reverberate the rays of the Sun on the parts of fecundation ; and we shall be put beyond the reach of doubt as to this, if we consider the colour and the form of it in most flowers. It has been remarked in the preceding Study, that of all colours, white is the most proper for reflecting the heat : now it is, in general, that which Nature bestows on the flowers that blow at cold seasons and in cold places, as we see is the case in the snow-drop, the lily of the valley, the hyacinth, the narcissus, and the anemone-nemorosa, which come into flower early in the Spring. We must likewise assign to this colour such as have slight shades of the rose and of the azure, as many hyacinths ; as well as those which have yellow and shining tints, as the flowers of the dandelion, the butter-flower of the meadow, and the wall gilly-flower. But such as blow at warm seasons, and in warm situations, as the cockle, the wild poppy, and the blue-bottle, which grow in Summer amongst the corn, are dressed in strong colours, such as purple, deep red, and blue ; for these absorb the heat without greatly reflecting it.

I do not know, however, that there are any flowers entirely black ; for in that case, it's petals, destitute of all power of reflection, would be entirely useless. In general, of whatever colour a flower may be, the under part of it's corolla, which reflects the rays of the Sun, is of a much paler tint than the rest. This
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is so very remarkable, that Botanists, who generally consider the colours of flowers as accidents merely, distinguish it by the name of *unguiculus* (a little nail). The unguicle is that with relation to the flower which the belly is with relation to animals : it's shade is always clearer than that of the rest of the petal.

The forms of flowers are no less adapted than their colours to reflect the heat. Their corollæ, divided into petals, are only an assemblage of mirrors directed toward one focus. Of these they have sometimes four, which are plain, as the flower of the cole-wort in the cruciform ; or a complete circle, as the daisy in the class of radiated ; or spherical portions, as the rose ; or entire spheres, as the bells of the lily of the valley ; or cones mutilated, as the foxglove, the corolla of which is formed like a sewing thimble.

Nature has placed at the focuses of these, plain, spherical, elliptical, parabolic, and other mirrors, the parts of the fecundation of plants, as she has placed those of generation in animals in the warmest parts of their bodies. These curves, which Geometricians have not yet examined, merit their most profound researches. Is it not astonishing, that they should have bestowed such learned pains to find out curves altogether imaginary, and frequently useless ; and that they should have neglected to study those which Nature employs so regularly, and in such variety, in an infinite number of objects ? Be this as it may, Botanists have given themselves still less trouble about the matter. They comprehend those of flowers under a small number of classes, without paying the slightest attention to their use, nay, without so much

as apprehending that they could have any. They confine themselves entirely to the division of their petals, which frequently change nothing of the configuration of their curves; and they frequently class under the same name those which are the most opposite. Thus, under the general designation of the *monopetalous* (those that have a single petal), they include the spheroid of the lily of the valley, and the trumpet of the convolvulus.

On this subject, a very remarkable circumstance claims our notice; namely, that frequently such as is the curve formed by the border, or upper extremity of the petal, such too is the plan of the whole petal itself; so that Nature presents to us the cut or shape of each flower in the contour of it's petals, and gives us, at once, it's plan and it's elevation. Thus roses, and the whole tribe bearing this denomination, have the border of their petals in sections of a circle, like the curve of the flowers themselves; the pink and blue-bottle, which have their selvage notched, present the plans of their flowers plaited up like fans, and form a multitude of focuses.

For want of the real flower, these curious remarks may be verified from the drawings of Painters who have been the most exact in copying plants, but who are indeed very few in number. Such is, among those few, *Aubriet*, who has drawn the plants of *Tournefort's* Voyage to the Levant,* with the taste of a Painter, and the precision of a Botanist. You may there see the confirmation of what I have just been advancing. For example, the *scorzonera Græca saxa-*

* *Tournefort's* Voyage to the Levant, vol. i.

tilis & *maritima foliis variè laciniatis*, (the Greek taxatile and marine scorzonera, with leaves variously feoloped) which is there represented, has it's petals, or half-flowers, squared at the extremity, and plane in their surface. The flower of the *stachis Cretica latifolia*, (the broad-leaved stachis of Crete) which is a monopetalous tubular plant, has the upper part of it's corolla undulated, as well as it's tube. The *campanula Græca saxatilis jacobææ foliis*, (the Greek bellflower of the rocks, with ragwort leaves) presents these consonances in a manner still more striking. This campanula, which *Tournefort* considers as the most beautiful he had ever seen, and which he sowed in the Royal Garden at Paris, where it succeeded very well, is of the pentagonal form. Each of it's faces is formed of two portions of a circle, the focuses of which, undoubtedly, meet on the same anthera; and the border of this campanula is notched into five parts, each of which is likewise cut into the form of a Gothic arch, as each subdivision of the flower is. Thus, in order to know at once the curve of a flower, it is sufficient to examine the brim of it's petal.

It is of much utility to attend to this observation, for otherwise it would be extremely difficult to determine the focuses of the petals. Besides, flowers lose their internal curves in herbaries. I believe these consonancies to be general; I presume not however to assert that they admit of no exceptions. Nature may deviate from this order, in some species, for reasons which I know not. It cannot be too frequently repeated; She has no general and unvarying Law, except the accomodation of beings endowed with sensibility.

fibility. The relations just now suggested, between the curve of the brim and that of the petal, seem beside to be founded on this universal Law, as they present conformities of such agreeable approximation.

The petals appear to such a degree destined to warm the parts of fecundation, that Nature has placed a circle of them around most compound flowers, which are themselves aggregations of small tubes, infinite in number, that form so many particular flowers, or, if you will, flowrets. This is obviously remarkable in the petals which surround the disks of daisies and sun-flowers. They are likewise to be met with around most of the umbelliferous plants : though each flowret which composes them, has it's particular petals, there is a circle of others still greater, which encompasses their assemblage, as you may see in the flowers of the daucus.

Nature has still other means of multiplying the reflexes of heat in flowers. Sometimes she places them on stems of no great elevation, in order to collect warmth from the reflections of the Earth ; sometimes she glazes over their corollæ with a shining varnish, as the yellow meadow-ranunculus, known by the trivial name of butter-flower. Sometimes she withdraws the corolla, and makes the parts of fecundation to shoot from the partition of an ear, of a cone, or of the branch of a tree. The forms of the spike, and of the cone, appear to be the best adapted for reverberating on them the action of the Sun, and to ensure their fructification ; for they always present some one side or another sheltered from the cold. Nay, it is very remarkable that the aggregation of flowers, in a
conical

conical and spike form, is very common to herbs and to trees of the North, and rarely to be found in those of the South. Most of the gramineous plants which I have seen in southern Countries, do not carry their grains in a spike, or closely compacted ear, but in flowing tufts, and divided into a multitude of particular stems, as the millet and rice. The maize, or Turkey-corn, I admit, bears it's grains in a large ear; but that ear is for a considerable time shut up in a bag; and on bursting from it, pushes away over it's head a long covering of hair, which seems entirely destined to the purpose of sheltering it's flowers from the heat of the Sun.

Finally, what confirms me in the belief that the flowers of plants are adapted to the action of heat, conformably to the nature of every climate, is this, that many of our European plants vegetate extremely well in the Antilles Islands, but never come to seed there. Father *du Tertre* observed, that in those islands,* the cabbage, the sainfoin, the lucern, the favory, the sweet basil, the nettle, the plaintain, the wormwood, the sage, the liver-wort, the amaranth, and all our species of gramineous plants, thrive there wonderfully well, but never produced grains. These observations demonstrate, that it is neither the air, nor the soil, which is inimical to them; but the Sun, which acts with too much vivacity on their flowers, for most of these plants have theirs aggregated into an ear, which generally increases the repercussion of the solar rays.

I believe, at the same time, that such plants might

* Natural History of the Antilles, by Father *du Tertre*

be naturalized in the West-India Islands, as well as many others of our temperate climates, by selecting from the varieties of their species, those whose flowers have the smallest fields, and whose colours are the deepest, or those whose pannicles are divergent.

Not that Nature has no other resources except such as these, to make plants of the same genus attain perfection in different seasons and climates. She can render their flowers capable of reflecting the heat, in different degrees of Latitude, without any very sensible alteration of the form. Sometimes she mounts them on elevated stems, to remove them from the influence of the reflection of the ground. It is thus she has placed, between the Tropics, most of the apparent flowers upon trees. I have seen very few there in the meadows, but a great many in the forests. In those countries, you must look aloft in order to have a sight of flowers; in our native climes, we must cast our eyes on the ground for this purpose; for with us flowers grow on herbage and shrubbery. Sometimes she expands them under the shade of leaves; such are those of the palm-tree, of the banana, and of the *jacquier*, which grow close to the trunk of the tree. Such, likewise, are, in our temperate climates, those large white bell-formed flowers, known by the name of Lady's-snoek, which delight in the shade of the willow.

There are others, such as most part of the convolvuluses, which expand only in the night; others grow close to the ground, and exposed, as the pansy, but their drapery is dusky and velvety. There are some which receive the action of the Sun when at a considerable

siderable height, as the tulip; but Nature has taken her precautions so exactly, as to bring out this stately flower only in the Spring, to paint it's petals with strong colours, and to daub the bottom of it's cup with black.* Others are disposed in girandoles, and

* This flower, from it's colour, is, in Persia, the emblem of perfect lovers. *Chardin* tells us, that when a young Persian presents a tulip to his mistress, it is his intention to convey to her this idea, that like this flower, he has a countenance all on fire, and a heart reduced to a coal. There is no one Work of Nature, but what awakens in man some moral affection. The habits of society insensibly efface, at length, the sentiment of it; but we always find it in vigor among Nations who still live near to Nature.

Many alphabets have been imagined in China, in the earlier ages, after the wings of birds, fishes, shells, and flowers: of these, very curious characters may be seen in the *China Illustrated* of *Father Kercher*. It is from the influence of those natural manners, that the Orientals employ so many similitudes and comparisons in their languages. Though our metaphysical eloquence makes no great use of them, they frequently produce nevertheless a very striking effect. *J. J. Rousseau* has taken notice of that which the Ambassador of the Scythians addressed to *Darius*. Without speaking a word, he presented him with a bird, a frog, a mouse, and five arrows †. *Herodotus* relates, that the same *Darius* sent word to the Greeks of Ionia, who were laying waste the country, that if they did not give over their depredations, he would treat them like pines. The Greeks, who by this time had become infected with wit, and had proportionally begun to lose sight of Nature, did not comprehend the meaning of this. Upon enquiry, they at length discovered that *Darius* meant they should understand it to be his resolution utterly to exterminate them; for the pine-tree, once cut down, shoots out again no more.

† *Darius*, at first, understood this as a complete surrender of Scythian independance into his hands; but the event instructed him, that this high-spirited people intended to convey a bold defiance: "Unless you can fly as a bird, dig as a mouse, swim as a frog, our arrows shall reach you."

H. H.

receive the effect of the solar rays only under one point of the compass. Such is the girandole of the lilach, which, pointing with various aspects, to the East, to the South, to the West, and to the North, presents on the same cluster, flowers in bud, half open, fully blown, fading, and all the delightful shades of the florification.

There are flowers, such as the compound, which being in a horizontal position, and completely exposed, behold the Sun, like the Horizon itself, from his rising to his setting; of this description is the flower of the dandelion. But it possesses very peculiar means of sheltering itself from the heat: it closes entirely whenever the heat becomes excessive. It has been observed to open, in Summer, at half an hour after five in the morning, and to collect its petals toward the centre, about nine o'clock. The flower of the garden-lettuce, which is on the contrary in a vertical plane, opens at seven o'clock, and shuts at ten.

From a series of similar observations it was, that the celebrated *Linnaeus* formed a botanical time-piece; for he had found plants which opened their flowers at every hour of the day, and of the night. There is cultivated in the King's Garden, at Paris, a species of serpentine aloes, without prickles, whose large and beautiful flower exhales a strong odour of the vanilla, during the time of its expansion, which is very short. It does not blow till toward the month of July, and about five o'clock in the evening: You then perceive it gradually open its petals, expand them, fade, and die. By ten o'clock of the same night, it is totally

tally withered, to the great astonishment of the spectators, who flock in crowds to the sight; for what is uncommon is alone admired. The flower of our common thorn, I do not mean that of the white-thorn, is still more extraordinary; for it flowers so rapidly that there is scarce time to observe it's expansion.

These observations, taken in their connection, clearly demonstrate the relations of the corollæ to the heat of the Sun. To those which have been already produced, I shall subjoin one more by way of conclusion, which evidently proves the use for which they are intended; it is this, The duration of their existence is regulated by the quantity of heat which it is their destination to collect. The hotter it is, the shorter is their duration. They almost all drop off as soon as the plant is fecundated.

But if Nature withdraws the greatest number of flowers from the too violent action of the Sun, she destines others to appear in all the lustre of his rays, without sustaining the least injury from them. On the first she bestows dusky reflectors, or such as can close themselves as occasion requires; she provides others with parasols. Such is the crown-imperial, whose flowers, like a bell inverted, grow under the shade of a tuft of leaves. The chrysanthemum-peruvianum, or to employ a better-known term, the turnsol, which turns continually toward the Sun, covers itself, like Peru, the country from which it comes, with dewy clouds, which cool and refresh it's flowers, during the most violent heat of the day. The white flower of

the lychnis, which blows in our fields in Summer, and presents, at a distance, the resemblance of a Maltese-cross, has a species of contraction, or narrow collar, placed at it's centre, so that it's large shining petals turned back outwardly, do not act upon it's stamina. The white narcissus has, in like manner, a small tunnel. But Nature stands in no need to create new parts, in order to communicate new characters to her Works. She deduces them at once from existence and from non-existence; and renders them positive or negative, at her pleasure. She has given curves to most flowers, for the purpose of collecting the heat at their centre: she employs the same curves, when she thinks proper, in order to dissipate the heat: she places the focuses of them so as to act outwardly. It is thus that the petals of the lily are disposed, which are so many sections of the parabola. Notwithstanding the large size and the whiteness of it's cup, the more it expands, the more it disperses the fervent heat of the Sun; and while in the middle of Summer, at noon-day, all other flowers, parched by his burning rays, droop and bend their heads to the ground, the lily rears his head like a king, and contemplates face to face the dazzling orb, which is travelling majestically through the Heavens.

I proceed to display in a few words, the positive or negative relations of flowers, with respect to the Sun, to the five elementary forms which I have laid down in the preceding Study as the principles of the harmony of bodies. This is not so much a plan which I take upon me to prescribe to Botanists, as an invitation

tation to engage in a career so rich in observations, and to correct my errors by communicating some portion of their knowledge.

There are, therefore, reverberating flowers *perpendicular, conical, spherical, elliptical, parabolic, or plane*. To these may be referred most of the curves of flowers. There are, likewise, some flowers in form of a parasol, but the others are much more numerous; for the negative effects in every harmony are in much greater number than the positive. For example, there is but one single way of coming into life, and there are thousands of going out of it. We shall oppose, however, to every positive relation of flowers to the Sun, a principal negative relation, that we may be enabled to compare their effects in every Latitude.

PERPENDICULAR reverberating flowers are those which grow adhering by the back to a cone, to long catkins, or to an ear: such are those of the cedar, of the larch, of the fir, of the birch, of the juniper; of most of the northern gramineous plants, of the vegetables of cold and lofty mountains, as the cypress and the pine; or of those which flower in our climates about the end of Winter, as the hazel and the willow. A part of the flowers in this position is sheltered from the North wind, and receives the reflection of the Sun from the South side.

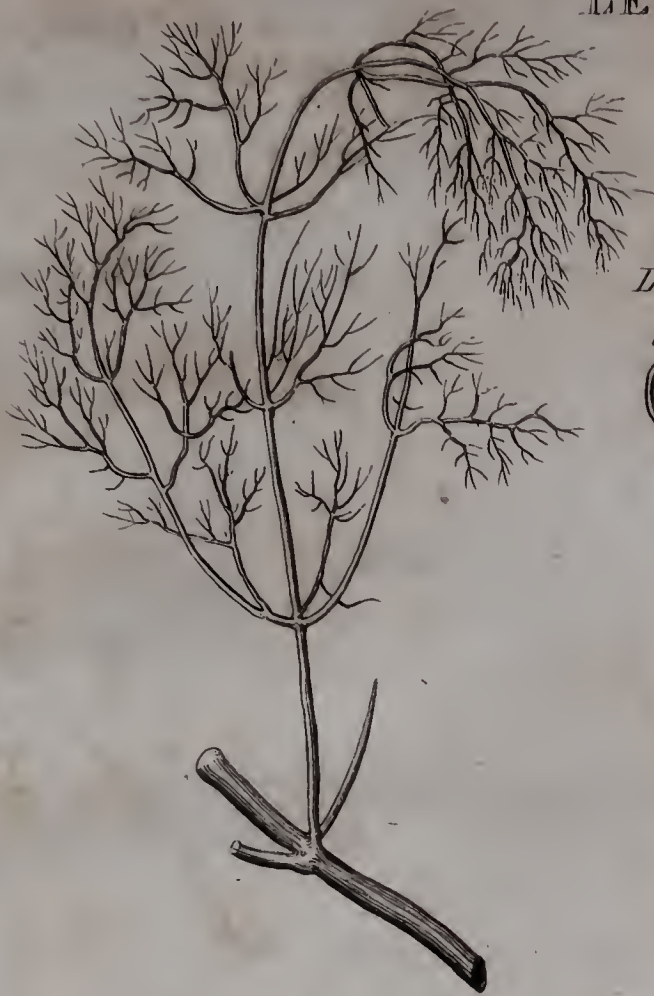
It is remarkable that all vegetables which bear cones, catkins, or spikes, present them at the extremity of their stems, exposed to all the action of the Sun. It is not so with those which grow within the Tropics; most of which, such as the palm-tree, bear divergent flowers, attached to pendent clusters, and shaded

shaded by their branches. The greatest part of the gramineous plants of warm countries have likewise divergent ears; such are the millets of Africa. The solid ear of the American maize is crowned with a hairy tuft which shelters it's flowers from the Sun. On the annexed plate are represented an ear of European corn, and an ear of the rice of southern Asia, to furnish the means of comparison.

CONICAL reverberating flowers reflect on the parts of florification a complete cone of light. It's action is very powerful; and it is accordingly very remarkable, that Nature has given this configuration of petal only to flowers which grow under the shade of trees, as to the convolvulus, which scrambles up around their trunk; and that she has assigned to this flower a very transient duration, for it scarcely lasts half a day; and when it's fecundation is completed, the border contracts inwardly, and gathers together like a purse. Nature has however given it a place in southern latitudes, but she has there tinged it with violet and blue, in order to weaken the effect. Besides, this flower scarcely ever opens in hot countries except in the night. From this nocturnal character I presume it is, that we are chiefly enabled to distinguish the convolvulus of the South, from that of our own climates, which blows in the day-time. In the plate we have represented the day-convolvulus, or that which is native with us, expanded; and that of the night, or of hot countries, closed; the one having a positive character with the light, and the other a negative.

The flowers which partake the most of this conical form

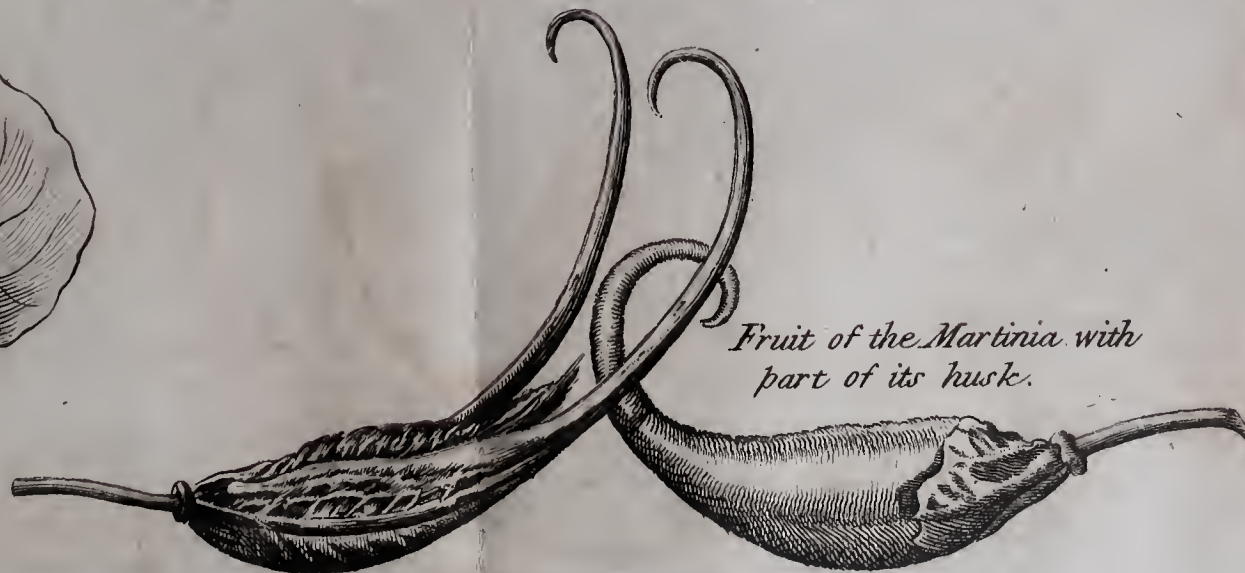
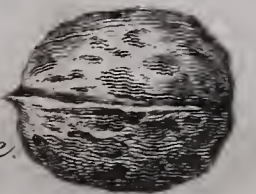
LEAVES WITHOUT AN AQUEDUCT, & NAUTICAL
FRUITS OF VEGETABLES OF THE SHORE.



*Leaf & Seeds
of Fennel*



*Leaf & Fruit
of the Walnuttree.*

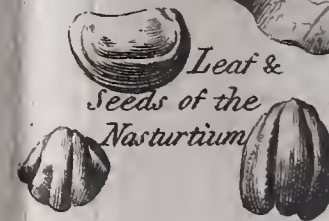


*Fruit of the Martinia with
part of its husk.*

*Leaf & Fruit of the Martinia
of the shores of la Vera Cruz.*



*Leaf &
Seeds of the
Nasturtium*



form are those which grow early in the Spring, as the flower of the arum, which is formed like a cornet; or those which thrive on lofty mountains, as the bears-ear of the Alps. When Nature employs it in Summer, it is almost always with negative characters, as in the flowers of the fox-glove, which are inclined, and dyed a deep red or blue colour.

SPHERICAL reverberating flowers are those whose petals are formed into segments of a circle. One might amuse himself very agreeably, in observing that these spherically formed petals have, at their focuses, the antheræ of the flower supported on fibrets, longer or shorter as the effect intended may require. It deserves farther to be remarked, that each petal is adapted to its particular anthera, sometimes to two, or even to three: so that the number of petals in a flower divides almost always exactly that of the antheræ. As to the petals, they scarcely ever exceed the number of five in rose-formed flowers, as if Nature had designed to express in that the number of the five terms of elementary progression, of which this beautiful form is the harmonic expression.

Spherical reverberating flowers are very common in our temperate climates. They do not throw back the whole reflection of their disks on the antheræ, like the convolvulus, but only the fifth part, because each of their petals has its particular focus. The rose-formed flower is spread over most fruit-trees, as the apple, the pear, the peach, the plumb, the apriicot, and the like; and over a great part of our shrubbery and herbage, such as the black and white-thorn, the bramble, the anemoné, and many others, most of which

which produce for Man a nutritious fruit, and which flower in the month of May. To this form may be likewise referred such as are spheroidal ; the lily of the valley for example.

This form, which is the harmonic expression of the five elementary forms, was admirably adapted to a temperature like ours, which is itself the proportional medium between that of the Icy and of the Torrid Zone. As spherical reflectors collect a great quantity of rays at their focuses, their action is very powerful, but at the same time of very transient duration. It is well known that nothing fades more quickly than a rose.

Rose-formed flowers are very rare between the Tropics, especially those whose petals are white. They thrive only under the shade of trees. I have known many of the inhabitants of the Isle of France make fruitless efforts to raise strawberries there ; but one of them, who lived indeed in an elevated part of the Island, found means of procuring them in great plenty, by planting his beds under trees, and in ground but half-cleared.

As a compensation for this, Nature has multiplied in warm countries papilionaceous, or leguminous flowers. The leguminous flower is entirely opposite to the rose-formed. It usually has five rounded petals like the other : but instead of being disposed round the centre of the flower, in order to reverberate thither the rays of the Sun, they are on the contrary folded inward around the antheræ, for the purpose of sheltering them. You distinguish in them a pavilion, two wings, and a ridge, usually divided into two, by
which

which the antheræ and the embryo of the fruit are closely covered over. Between the Tropics, accordingly, a great number of trees, shrubs, creepers, and grasses, have papilionaceous flowers. Every species of our pease and french-beans succeed there wonderfully well, and those countries produce infinite varieties of them. Nay it is remarkable that even at home, those plants delight in a sandy and warm soil, and exhibit their flowers in the middle of Summer. I consider leguminous flowers therefore as of the parasol kind. To those same negative effects of the Sun may likewise be referred the form of flowers with gullets, which conceal their antheræ, such as the calfsnout, which takes pleasure in blowing on the sides of walls.

ELLIPTICAL reverberating flowers are those which present oval-formed cups, narrower a-top than in the middle. It is very perceptible that this form of cup, the perpendicular petals of which approach toward each other at the summit, shelters in part the bottom of the flower: and that the curves of these same petals, which have several focuses, do not collect the rays of the Sun toward one single centre: such is the tulip. It is remarkable that this oblong-formed flower is more common in warm countries than the rose-formed. The tulip grows spontaneously in the vicinity of Constantinople. To this form may likewise be referred that of the liliaceous, which are more common there than elsewhere. However, when Nature employs them in countries still farther to the South, or in the middle of Summer, it is almost always with negative characters; thus she has inverted

ed the tulip-form flowers of the imperial, which is originally from Persia, and has shaded them with a tuft of foliage. Thus she bends back outwardly, in our climates, the petals of the lily; but the species of white lilies which grow between the Tropics, have besides their petals cut out into thongs.

Flowers with PARABOLIC, or PLANE, mirrors, are those which reflect the rays of the Sun in parallel directions. The configuration of the first gives much lustre to the corolla of these flowers, which emit from their bosom, if I may be allowed the expression, a bundle of light, for they collect it toward the bottom of their corolla, and not on the antheræ. It is perhaps in order to weaken the action of it, that Nature has terminated flowers of this form in a species of cowl, which Botanists call spur. It is probably in this tube that the focus of their parabola terminates, which is perhaps situated there, as in many curves of this kind, beyond it's summit. Flowers of this sort are frequent between the Tropics; such is the flower of the *poincillade* of the Antilles, otherwise called the peacock-flower, on account of it's beauty; such is also the *nafturtium*, or nun of Peru. It is even pretended that the perennial species is phosphoric in the night-time.

Flowers with plane mirrors produce the same effects; and Nature has multiplied the models of them in our Summer flowers, and in those which thrive in warm and sandy soils, as the radiated; such are the flowers of the dandelion. We likewise meet with them in the flowers of the *doronicum*, of the lettuce, of the succory; in the asters, in the meadow daisy,

daisy, and others. But she has placed the original model of them under the Line, in America, in the broad sun-flower, which we have borrowed from Brasil.

These being flowers whose petals have the least activity, are likewise those which are of the longest duration. Their attitudes are varied without end. Such as are horizontal, like those of the dandelion, close, it is said, toward the middle of the day; they are, likewise, such as are the most exposed to the action of the Sun, for they receive his rays from his rising to his setting.

There are others which instead of closing their petals invert them, and this produces nearly the same effect; such is the flower of the camomile. Others are perpendicular to the Horizon, as the flower of lettuce. The blue colour with which it is tinged, contributes farther towards weakening the rays of the Sun, which in this respect would act too vehemently upon it. Others have only four horizontal petals; such as the cruci-form; the species of which are very common in hot countries. Others bear around their disk flowrets which overshadow it; such is the blue-bottle of the corn-field, which is represented on the plate in opposition to the daisy. This last flowers early in the Spring, and the other in the middle of Summer.

We have said somewhat of the general forms of flowers, but we should never come to a conclusion were we to enter into a discussion of their various aggregations. I believe however that they may be referred to the plan itself of the flowers. Thus the umbelliferous

umbelliferous flowers present themselves to the Sun under the same aspects as the radiated.

I must beg leave to recapitulate only what has been said respecting their reflecting mirrors. The reverberated perpendicular, of a cone or ear form, collects on the antheræ of the flowers an arch of light of ninety degrees, from the Zenith to the Horizon. It farther presents, in the inequality of it's panels, reflecting surfaces.

The conical reflector collects a cone of light of sixty degrees. The spherical reflector unites in each of it's five petals, an arch of light of thirty-six degrees of the Sun's course, supposing that luminary to be in the Equator.

The elliptical reflector collects a smaller quantity, from the perpendicular position of it's petals; and the parabolic reflector, as well as that with plane mirrors, sends back the rays of the Sun divergently, or in parallels.

The first form appears to be very common in the flowers of the Icy Zones; the second in those which thrive under the shade; the third in temperate latitudes; the fourth in warm countries; and the fifth in the Torrid Zone. It would likewise appear that Nature multiplies the divisions of their petals, in order to diminish their action. Cones and ears have no petals. The convolvulus has but one; rose-formed flowers have five; elliptical flowers, as the tulip and the liliaceous, have six; flowers with plane reflectors, as the radiated, have a great number.

Farther, flowers have parts adapted to the other elements. Some are clothed externally with a hairy garment

garment to shelter them from the cold. Others are formed to blow on the surface of the water; such are the yellow roses of the *nymphæa*, which float on lakes, and accommodate themselves to the various movements of the waves without being wet by them, by means of the long and pliant stems to which they are attached. Those of the *valisneria* are still more artfully disposed. They grow in the Rhone, and would be there exposed to frequent inundation by the sudden swellings of that river, had not Nature given them stems formed like a cork-screw, which draw out at once to the length of three or four feet.

There are other flowers adapted to the winds and to the rains, as those of pease, which are furnished with little boats to cover and shelter the stamina, and the embryos of their fruits.* Besides, they have large pavilions, and rest on tails bent and elastic as a nerve; so that when the wind blows over a field of pease, you may see all the flowers turn their back to the wind like so many weather-cocks.

This class appears to be very generally diffused

* I am persuaded that the bearing of most flowers is adapted to the rains, and for this reason it is that many of them have the form of mufflers, or ridges, like little boats inverted, which shelter the parts of fecundation. I have remarked that many species of flowers possess the instinct, shall I venture to call it? of closing themselves when the air is humid, and that the impregnation of fruit-tree blossoms is injured much more by the rain than by the frost. This observation is of essential importance to gardeners, who frequently cause the flowers of their strawberry plants to miscarry by watering them. As far as I can judge, it would be better to water plants, in blossom, by little trenches, according to the Indian method, rather than by asperision.

over places much exposed to the winds. *Dampier* relates that he found the desert shores of New-Guinea covered with pcase, whose blossoms were red and blue. In our climates the fern, which crowns the summits of hills always battered with the wind and the rain, bears it's flower turned toward the Earth, on the back of it's leaves. There are even certain species of plants the flowering of which is regulated by the irregularity of the winds. Such are those the male and female individuals of which grow on separate stems. Tossed hither and thither over the earth, frequently at great distances from each other, the powder of the male could fecundate but a very few female flowers, unless at the season of their florification the wind blew from various quarters. Wonderful to be told ! There are invariable generations depending on the variableness of the wind. Hence I presume that in countries where the winds always blow from the same quarter, as between the Tropics, this species of florification must be uncommon ; and if it be found there at all, it must be regulated precisely according to the season when those regular winds vary.

It is impossible to entertain a doubt respecting those admirable relations, however remote they may appear, when we observe the attention with which Nature has preserved flowers from the shocks to which they might be exposed, from the winds themselves, upon their stems. She inwraps them for the most part in an integument, which Botanists call the *calix*. The more ramous the plant is the thicker is the calix of it's flower. She sometimes fringes it
with

with little cushions and beards, as may be seen in the roef-bud. Thus the mother puts a pad round the head of her little child, to secure it against accidents from falling. Nature has so clearly marked her intention as to this, in the case of the flowers of ramous plants, that she has deprived of this clothing such as grow on stems that are not branchy, and where they are in no danger from the agitation of the winds. This may be remarked with regard to the flowers of Solomon's seal, of the lily of the valley, of the hyacinth, of the narcissus, of most of the liliaceous, and of plants which bear their flowers isolated, on perpendicular stems.

Flowers have, farther, very curious relations with animals and with Man, from the diversity of their configurations, and from their smells. Those of one species of the orchis represent bugs, and exhale the same unpleasant odour. Those of a species of the arum resemble putrid flesh, and have the infection of it to such a degree, that the flesh-fly resorts thither to deposit her eggs. But those relations, hitherto very superficially investigated, do not come in so properly under this article; it is sufficient for me to have here demonstrated, that they actually have very clearly marked relations with the elements, and especially with the Sun.

When Botanists shall have diffused over this branch of the subject all the light of which it is susceptible, by examining their focuses, the elevation to which they rise above the ground, the shelter, or the reflection of the bodies which are in their vicinity, the variety of their colours, in a word, all the means by

which Nature compensates the differences of their several exposures, and they will no longer doubt about those elementary harmonies; they will acknowledge that the flower, far from presenting an unvarying character in plants, exhibits on the contrary a perpetual character of diversity. It is by this principally that Nature varies the species in the same genus of plant, in order to render it susceptible of fecundation on different sites. This explains the reason why the flowers of the great chestnut of India, but originally from America, are not the same with those of the European chestnut; and that those of the fullers-thistle, which thrives on the brink of rivers, are different from those of thistles which grow in lofty and dry places.

A very extraordinary observation shall serve irrefragably to confirm all that we have just now advanced: it is this, That a plant sometimes totally changes the form of its flowers in the generation which reproduces it. This phenomenon greatly astonished the celebrated *Linnaeus*, the first time that it was submitted to his consideration. One of his pupils brought him, one day, a plant perfectly similar to the linarium, the flower excepted; the colour, the favour, the leaves, the stem, the root, the calix, the pericarpium, the seed, in a word, the smell, which is a remarkable circumstance, were exactly the same, only its flowers were in form of a tunnel, whereas those of the linarium are gullet-formed. *Linnaeus* imagined at first that his pupil intended to put his knowledge to the test, by adapting a strange flower to the stem of that plant; but he satisfied himself that

it

it was a real linarium, the flower of which Nature had totally changed. It had been found among other linaria, in an island seven miles distant from Upsal, near the shore of the sea on a sandy and gravelly bottom. He himself put it to the proof, that it perpetuated itself in this new state by it's seeds. He afterwards found some of it in other places: and, what is still more extraordinary, there were among these last some which carried on the same stalk flowers tunnel-formed, and flowers gullet-formed.

He gave to this new vegetable the name of *pelorum* from the Greek word *πῆλωρ*, which signifies prodigy. He afterwards observed the same variations in other species of plants, and among the rest in the eriocephalous thistle, the seeds of which produce every year in the garden of Upsal, the fantastic thistle of the Pyrennées.* This illustrious Botanist accounts for these transformations, as being the effect of a mongrel generation, disturbed by the fecundating farina of some other flower in the vicinity. It may be so; to his opinion however may be opposed the flowers of the pelorum, and of the linarium, which he found united on the same individual. Had it been the fecundation which transformed this plant, it ought to have given similar flowers in the whole individual. Besides, he himself has observed that there was not the slightest confusion in the other parts of the pelorum, any more than in it's virtues; but this must have been the case, as well as in the flower, had it been produced by a mixture of some strange breed. Finally, the pelorum re-produced itself by seed,

* Upsalian Dissertation, for December 1744; page 59, note 6.

which does not take place in any one mongrel species of animals.

This sterility, in mongrel branches, is an effect of the sage consistency of Nature, who cuts off divergent generations, in order to prevent the primordial species from being confounded, and from at length disappearing altogether. As to the rest, I pry neither into the causes, nor the means, which she is pleased to conceal from me, because they far transcend my comprehension. I confine my enquiries to the ends which she kindly unfolds; I confirm myself in the belief, from the variety of flowers in the same species, and sometimes in the same individual, that they serve in certain cases as reflectors to vegetables, for the purpose of collecting, conformably to their position, the rays of the Sun on the parts of fecundation; and in other cases as parasols, to put them under covert from excessive heat.

Nature deals by them, nearly, as she does by animals which are exposed to the same variations of Latitude. In Africa she strips the sheep of the woolly fleece, and gives her flock smooth hair, like that of the horse: and to the North on the contrary she clothes the horse with the shaggy fur of the sheep. I have been an eye-witness of this double metamorphosis, at the Cape of Good-Hope and in Russia. I have seen at Petersburg Norman and Neapolitan horses, whose hair naturally short, was so long and so frizzled in the middle of Winter, that you would have believed them covered with wool like sheep. It is not without reason, therefore, that the ancient proverb says: *GOD tempers the wind to the shorn lamb:*
and

and when I behold his paternal hand varying the fur of animals conformably to the degree of heat and cold, I can easily believe that it varies, in like manner, the mirrors of flowers conformably to the Sun. Flowers then may be divided, with relation to the Sun, into two classes; into reverberating flowers, and flowers in form of a parasol.

If there be any constant character in plants we must look for it in the fruit. It is thitherward that Nature has directed all the parts of vegetation, as to the principal object. That saying of WISDOM itself, *by their fruits ye shall know them*, is at least as applicable to plants as to the human species.

We shall examine therefore the general characters of plants, with relation to the places where their seeds are accustomed to grow. As the animal kingdom is divided into three great classes, quadrupeds, volatiles, and aquatics, relatively to the three elements of the Globe; we shall in like manner divide the vegetable kingdom into ærial or mountain-plants; into aquatics, or those of the shores; and into terrestrial, or those of the plains. But as this last participates of the two others, we shall not dwell upon it; for though I am persuaded that every species, nay that every variety, may be referred to some particular site of the earth, and may grow there in it's highest degree of beauty, it is sufficient to say as much of it here as may be necessary to the prosperity of a small garden. When we shall have traced invariable characters, in the two extremities of the vegetable kingdom, it will be easy to refer to the intermediate classes

those which are adapted to them. We begin with the plants of the mountains.

ELEMENTARY HARMONIES OF PLANTS WITH THE
WATER AND THE AIR, BY MEANS OF THEIR LEAVES
AND FRUITS.

When the AUTHOR of Nature designed to clothe with vegetables even the highest and steepest pinnacles of the Earth, He first adapted the chains of mountains to the basons of the seas which were to supply them with vapours; to the course of the winds which were to waft them thither, and to the different aspects of the sun by which they were to be heated. As soon as those harmonies were established between the elements, the clouds ascended out of the Ocean, and dispersed themselves over the most remote parts of the Continents. There they distilled under a thousand different forms, in fogs, in mists, in dews, in rains, in snows. They descended from the heights of the Atmosphere in every possible variety of manner; some in a tranquil air, such as our Spring showers, came down in perpendicular drops, as if they had been strained through a sieve; others, driven by the furious winds, beat horizontally on the sides of the mountains; others fell in torrents, like those which for nine months of the year inundate the Island of Gorgona, placed in the heart of the Torrid Zone, in the burning Gulf of Panama. There were some which accumulated themselves, in mountains of snow, on the inaccessible summits of the Andes, to cool by their effusions the Continent of South-America, and by their icy Atmosphere, the vast expanse of the Pacific.

cific Ocean. In a word, mighty rivers flowed over regions where the rain never descends, and the Nile watered the plains of Egypt.

Then GOD said: "Let the Earth bring forth
"grafs, the herb yielding feed, and the fruit-tree
"yielding fruit after his kind, whose seed is in itself
"upon the Earth." At the voice of the All-Mighty, the vegetables appeared with organs perfectly fitted to collect the blessings of Heaven. The elm arose on the mountains which skirt the Tanaïs, clothed with leaves in form of a tongue; the tufted box started from the brow of the Alps; and the prickly caper-tree from the rocks of Africa, with leaves hollowed into spoons. The pines on the sandy Norwegian hills attracted the vapours which were floating in the air, with their slim foliage disposed like a Painter's pencil; the verbasicum displayed it's broad leaves on the parched sand, and the fern presented on the hill it's fan-like foliage to the rainy and horizontal winds. A multitude of other plants, from the bosom of the rocks, from firata of flint, nay even from marble incrustations, drunk in the waters of Heaven by cornets, by sandals, and by cruets. From the cedar of Lebanon down to the violet which perfumes the grove, there was not one but what presented it's large goblet, or it's tiny cup, conformably to it's necessity, or it's station.

This adaptation of the leaves of plants in elevated situations, for receiving the descending distillations of the rain, is varied without end; but the character of it is discernible in most, not only in their concave forms, but likewise in a little canal, scooped out on
the

the pedicle by which they are attached to their branches. It has something of a resemblance to that which Nature has traced on the upper lip of Man, to receive the humours which descend from the brain. It is particularly perceptible on the leaves of artichokes, which being of the nature of thistles, agree with dry and sandy situations. These have besides collateral awnings to prevent the loss of any of the water that falls from Heaven. Plants which grow in places very hot, and very parched, sometimes have their stems or their leaves transformed entirely into a canal. Such are the aloes of the island of Zocotara, in the mouth of the Red-Sea, or the prickly taper of the Torrid Zone. The aqueduct of the aloes is horizontal, and that of the taper perpendicular.

What has prevented Botanists from remarking the relations which the leaves of plants have with the waters that feed and refresh them, is their seeing them every where nearly of the same form, in the valleys, as on the heights; but though mountain-plants present foliages of every kind of configuration, you may easily discern, from their aggregation in form of pencils, or fans, from the gathering of the leaves, or from equivalent signs, that they are destined to receive the rain water, but chiefly from the aqueduct which I have just mentioned. This aqueduct is traced on the pedicle of the smallest leaves of mountain-plants; by means of it Nature has rendered the forms themselves of aquatic-plants susceptible of vegetation in the most parched situations.

The bulrush, for example, which is only a round and full straw, that grows by the water-side, did not
appear

appear susceptible of collecting any humidity in the air, though it is very well suited to lofty situations, from it's capillaceous form, which like that of gramineous plants presents nothing to the wind to lay hold of. In fact, if you consider the different species of rush which clothe the mountains in many parts of the world, such as that called *icho*, on the lofty mountains of Peru, the only vegetable almost that grows there, and those which thrive with ourselves in dry sands, or on heights, you would at the first glance believe them similar to the rush of marshy places; but with a little attention, and not without astonishment, you will observe that they are hollowed into a furrow the whole of their lengthwise direction. They are like other rushes convex on one side, but they differ from them essentially, in that they are all concave on the other; I was enabled to distinguish, by this same character, the *spatha*, which is a rush of the mountains of Spain, and is now frequently manufactured at Paris into cordage for their draw-wells.

Many leaves even of the plants of the plains assume, on their first springing up, this form of little furrow, or spoon, as those of the violet, and of most gramineous plants. You may perceive in the Spring, the young tufts of these raising themselves upright toward Heaven, like paws, to catch the falling drops, especiall when it begins to rain; but most plants of the plains lose their gutter as they expand. It has been bestowed on them only during the season when it was necessary to their growth. It is permanent only in the plants of the mountains. It is traced, as has been mentioned, on the pedicle of the leaves, and
conducts

conducts the rain-water into the tree from the leaf to the branch : the branch, by the obliquity of it's position, conveys it to the trunk, from whence it descends to the root, by a series of successive dispositions. If you pour water gently over the leaves of a mountain-shrub which are the farthest from it's stem, you will perceive it pursue the progress which I have just indicated, and not a single drop will be lost on the ground.

I have had the curiosity to measure in some mountain-plants, the inclination which their branches form with their stem ; and I have found, in at least a dozen of different species, as in the fern, the thuia, and the like, an angle of about thirty degrees. It is very remarkable, that this degree of incidence is the same with that which is formed, in a flat country, by the course of many rivulets and smaller rivers, with the great rivers into which they discharge themselves, as may be ascertained by reference to maps. This degree of incidence appears to be the most favourable to the efflux of many fluids, which direct themselves toward one single line. The same Wisdom has regulated the level of the branches in trees, and the course of the stream through the plains.

This inclination undergoes some varieties in certain mountain-trees. The cedar of Lebanon, for example, sends forth the lower part of it's branches in an upward direction toward Heaven, and lowers their extremities, by bending them downward to the Earth. They have the attitude of command which is suited to the king of vegetables, that of an arm raised up into the air, with the hand gently inclining. By

means

means of the first disposition, the rain-water is conveyed along the sloping branch to the trunk ; and by the second, the snows, in the regions of which it takes delight to dwell, slide away from off it's foliage. It's cones have in like manner two different attitudes ; for it inclines them at first toward the Earth, to shelter them at the season of their flowering ; but when they are fecundated, it erects them toward Heaven. The truth of these observations may be confirmed by referring to a young and beautiful cedar in the Royal Garden, which, though a stranger, has preserved in the midst of our climate the air of a King, and the majestic port of Lebanon.

The bark of most mountain-trees is equally adapted for conducting the rain-water from the branches to the roots. That of the pine is in large perpendicular ribs ; that of the elm is cleft and chinked longitudinally ; that of the cypress is spongy, like the coat of flax.

The plants of mountains, and of dry grounds, have a farther character, which is in general peculiar to them : it is that of attracting the water which floats in the air in imperceptible vapours. The *parietaria* (pellitory) which has derived it's name from the Latin word *pariete* (wall), because it grows on the sides of walls, has it's leaves almost always in a humid state. This attraction is common to most trees of the mountains. Travellers unanimously assure us that there is, in the mountains of the Island of Ferro, a tree which furnishes every day, to that island, a prodigious quantity of water. The islanders call it *garoé*, and the Spaniards *santo*, from it's singular utility. They tell

tell us it is always furrounded with a cloud which distils copiously along it's leaves, and fills with water the large reservoirs which are constructed at the root of this tree, affording an abundant supply for the island.

This effect is perhaps somewhat exaggerated, though related in nearly the same terms by persons of different Nations: but I give full credit to the general fact. The real case I take to be this: it is the mountain which attracts from afar the vapours of the Atmosphere, and that the tree, situated in the focus of attraction, collects them around it.

Having frequently spoken in the course of this Work, of the attraction of the summits of many mountains, the Reader perhaps will not be displeased if I present to him, in this place, an idea of that branch of the hydraulic architecture of Nature. Among a great number of curious examples which I might produce to this purpose, and which I have collected, as an addition to my materials on the subject of Geography, I beg leave to present one, which I have extracted not from a systematic Philosopher, but from a simple and unaffectedly sprightly traveller of the last age, who relates things as he saw them, and without pretending to deduce consequences of any kind whatever. It is a description of the summits of the Island of Bourbon, situated in the Indian Ocean, extending to the twenty-first degree of South Latitude. I copy it from the writings of *M. de Villers*, who was then Governor of that island under the East-India Company. It was published in the journals of the first voyages made by our French Navigators into
Arabia-

Arabia-Felix, about the year 1709, and given to the World by M. *de la Roque*. See that Work, page 201.

“ Of those plains,” says M. *de Villers*, which are upon the mountains (of Bourbon), “ the most remarkable, though no account has hitherto been given of it, is that to which they have given the name of the Plain of the Cafres, from a tribe of that People, slaves to the inhabitants of the Island, who went thither to conceal themselves, after they had run away from their masters. From the shore of the sea you rise by a gentle ascent for seven leagues together, in order to reach this plain, by the single path that leads to it, along the river of Saint Stephen : it is possible however to ride up on horseback. The soil is good and smooth to about a league and a half on this side the plain, planted with large and beautiful trees, the foliage of which, as it falls, serves for food to the tortoises, which are to be found there in great numbers.

“ The height of this plain may be estimated at two leagues above the Horizon ; it accordingly appears from below to be quite lost in the clouds. It’s circumference may be about four or five leagues. The cold is there insupportable, and a continual fog, which wets as much as rain, prevents your seeing objects ten paces distant ; as it falls in the night, you may see through it more clearly than by day : but then it freezes dreadfully, and in the morning before sun-rise the plain is frozen all over.

“ But what strikes the eye of the beholder as
“ very

“ very extraordinary, there are certain elevations of
 “ ground, cut out almost in form of round columns,
 “ and of a prodigious height ; for they cannot be
 “ much lower than the turrets of Notre-Dame at
 “ Paris. They are put down like pins on the skit-
 “ tle-ground, and the resemblance is so strong, that
 “ you may easily mistake on reckoning them : they
 “ go by the name of *pitons* (pins). If you wish to
 “ stop by one of those eminences to take rest, such
 “ of your company as are not inclined to repose,
 “ but want to go forward, must not withdraw so far as
 “ two hundred paces, otherwise they will be in great
 “ danger of not finding again the point of separa-
 “ tion, these pins are so many in number, all simi-
 “ lar in form, and so much arranged in the same
 “ manner, that the Creoles who are native there
 “ are themselves liable to mistake.

“ For this reason it is, that in order to prevent the
 “ unpleasant consequences of such an error, when a
 “ company of travellers take station at one of the
 “ pins, if any are disposed to make a farther excur-
 “ sion, they leave a person at the place of rendezvous,
 “ to make a fire, or raise a smoke, which may serve
 “ to direct and bring back the strayers ; and if the
 “ fog be *so thick*, which is frequently the case, as to
 “ hinder the fire or the smoke from being seen, they
 “ provide themselves with a kind of large shells,
 “ one of which is left with him who keeps station at
 “ the pin ; another is carried off by the separating
 “ party ; and when they wish to return, some one
 “ blows violently into the shell, as into a trumpet,
 “ which emits a very shrill sound, and is capable of
 “ being

“ being heard at a great distance ; this is answered
“ by the other, and being repeated as often as is necessary,
“ they are easily recovered from straying,
“ and collected at the point of departure. Without
“ such precautions the traveller might be bewildered.

“ In this plain are many aspin-trees, and they are
“ always green. Other trees are covered with a
“ moss of more than a fathom in length around
“ their trunk and large branches. They are withered,
“ without foliage, and so impregnated with moisture,
“ that it is impossible to make them take fire.
“ If with much difficulty you are able to kindle some
“ of the smaller boughs, it is only a dark fire without
“ flame, which emits a reddish smoke that defiles
“ the meat without roasting it. You can hardly
“ find a spot in this plain on which to kindle a fire,
“ unless by looking about for some small elevation
“ round the peaks ; for the soil of the plain is so
“ humid that the water every where spouts out, so
“ that you are continually in mud, and moistened up
“ to the calf of the leg. Great numbers of blue
“ birds are to be seen there nestling in the herbage,
“ and among the aquatic ferns. This plain was
“ unknown before the desertion of the Cafres. In
“ order to get down you must return by the same
“ way that you ascended, unless you choose to run
“ the risk of another path, which is very rough and
“ dangerously steep.

“ From the plain of the Cafres may be seen the
“ mountain known by the name of *Trois Salases*,
“ from the three points of that rock, the loftiest in

“ the Island of Bourbon. All it's rivers issue from
“ thence, and it is so steep on every side that there
“ is no possibility of climbing it.

“ There is besides in this island, another plain,
“ called the Plain of Silaos, higher than that of the
“ Cafres, and of no greater value : it is extremely
“ difficult to get up to it.”

In the lively description of our Traveller, we must overlook some errors in Physics, such as his assigning to the Plain of the Cafres an elevation of two leagues above the Horizon. He had not learned from the barometer and thermometer that there is no such elevation on the face of the Globe, and that at the perpendicular height of one league only, the freezing point is invariable. But from the thick fog which surrounds those peaks, from that continual mist which wets as much as rain, and which falls during the night, it is evidently perceptible that they attract to them the vapours which the Sun raises out of the Sea in the day-time, and which disappear in the night. Hence is formed that sheet of water which inundates the Plain of the Cafres, and from which most of the brooks and rivulets that water the island take their rise. You may equally distinguish a vegetable attraction in those ever-green aspens, and those other trees, at all times humid, which it is impossible to kindle into flame.

The Island of Bourbon is almost round, and rises out of the Sea in the shape of half an Orange. On the highest part of this hemisphere are situated the Plains of Silaos and of the Cafres, where Nature has placed those labyrinths of peaks continually involved

in

in fogs, planted like nine pins, and elevated like so many turrets.

Did time and room permit I could make it evident, that there are a multitude of similar peaks on the chains of lofty mountains, of the Cordeliers, of Taurus, and others, at the centre of most islands, without admitting the possibility of supposing, though the opinion be current, that they are the remains of a primitive Earth raised to that height; for what must have become, as has been already demanded, of the wreck of that Earth, the pretended testimonies of which arise on every hand over the surface of the Globe? I could demonstrate that they are placed in aggregations, and in situations adapted to the necessities of the countries of which they are, in some sense, the reservoirs; some in a labyrinth, as those of the Island of Bourbon, when they are on the summit of a hemisphere, from whence they are destined to distribute the waters of Heaven in every direction; others in form of a comb, when they are placed on the extended crest of a chain of mountains, as the pointed peaks of the chain of Taurus and of the Cordeliers; others grouped into pairs, into threes, according to the configuration of the territory which they are to water. They are of many forms, and of different constructions: some of them are incrustations of earth, as those of the Plain of the Cafres, and of some of the Antilles Islands, and which are besides so steep, as to be entirely inaccessible. Those incrustations of earth demonstrate that they have at once fossil and hydraulic attractions.

There are others which present long needles of

solid and naked rock ; others are of a conical form ; others are flattened as a table, such as that of Table-mountain at the Cape of Good-Hope, where you may frequently see the clouds accumulate, and spread like a table-cloth. Some are not apparent, but entirely involved in the side of mountains, or in the bosom of plains. They are all distinguishable by the fogs which they attract around them, and by the sources which emit their streams in the vicinity. Nay you may rest assured that there is no source but in the neighbourhood of some quarry of hydro-attractive, and, for the most part, of metallic stone. I ascribe the attraction of those peaks to the vitreous and metallic bodies of which they are composed : and I am persuaded it might be possible to imitate this architecture of Nature, and to form, by means of the attraction of such stones, fountains of water in the most parched situations. In general, vitreous bodies, and stones susceptible of polish, are very proper for this purpose ; for it is observable, that when water is diffused in great quantities through the air, as at the time of a general thaw, it is first attracted, and attaches itself, to the glass-windows and the polished stones of our houses.

I have frequently seen on the summit of the mountains in the Isle of France, effects similar to those of the peaks of the Plain of the Cafres in the Island of Bourbon. The clouds collect there incessantly around their peaks, which are steep and pointed like pyramids. Some of those peaks terminate in a rock of a cubical form, which crowns them like a chapter. Such is that which they call *Piterbooth*,
after

after the name of a Dutch Admiral ; it is one of the loftiest in the Island.

Those peaks are formed of solid rock, vitrifiable, and mixed with copper : they are real electrical needles both in form and substance. The clouds perceptibly deviate from their course to collect upon them, and there accumulate, sometimes to such a degree that the pinnacles become totally invisible. They thence descend into the cavity of the vallies, along the declivities of the forests, which likewise attract them, and there dissolve into rain, frequently forming rainbows on the verdure of the trees. This vegetable attraction of the forests of that island, is in such perfect harmony with the metallic attraction of the peaks of it's mountains, that a field situated in an open place in their vicinity, very often suffers for want of rain, whereas it rains the whole year round in the woods, which are not above a gun-shot distant. It was by the destruction of part of the trees that clothed the heights of the island, that most of the brooks which watered it have been dried up : and now nothing remains of them but the empty channel.

To the same injudicious management I ascribe the sensible diminution of a considerable part of the rivers of Europe, both great and small ; as is evident from a simple inspection of their ancient bed, which is much broader and deeper than the mass of water at this day transmitted by them to the Ocean. Nay I am persuaded that to this cause we must ascribe the dryness of the more elevated provinces of Asia, those of Persia, in particular, the mountains of which have no doubt been judiciously stripped of their trees, by the

first tribes who inhabited them. I am decidedly of opinion, that were we to plant in France mountain-loving trees, on the high grounds, and at the sources of our rivers, their ancient volume of water might be restored, and many rivulets might be made to re-assume their current through our plains, though they have long since ceased to flow. It is neither among the reeds, nor in the depth of the valley, that the Naiads conceal their exhaustless urns, as Painters represent them, but at the summit of rocks crowned with wood, and towering to the Heavens.

There is not a single vegetable, the leaf of which is disposed to receive the rain-water on the mountains, whose seed is not formed in a manner the best adapted to raise itself thither. The seeds of all mountain-plants are volatile. By inspecting their leaves it is possible to ascertain the character of their grains, and by inspecting the grains, that of their leaves, and thence to infer the elementary character of the plant. By mountain-plants I here wish to be understood to mean all those which grow in sandy and parched situations, on hillocks, in rocks, on steep ridges by the highway's side, in walls, and, in one word, at a distance from water.

The seeds of thistles, of blue-bottles, of dandelion, of succory, and many others, are furnished with pinnions, with plumes, with tufts, and various other means of rising, which convey them to prodigious distances. Those of the grasses, which likewise travel very far, are provided with a light chaffy coat, and with bearded husks. Others, such as those of the yellow gilly-flower, are cut into thin scales, and fly
by

REVERBERATING FLOWERS.

5. In horizontal

Planes.

6. Or Parabolic.

4. Elliptic.

3. Spheric.

2. Conic.

1. Perpendicular.

1. Ear of Rice.

5. The Daisy.



6. The Nun
of Peru.



11. The Blue Bottle.

4. The Tulip.



10. The Imperial.

3. The Simple Rose.



9. Pea Blossom.

2. Convolvulus of the Day.



8 Convolvulus of the Night.



7. Ear of Rice.

11. In unequal Plane.

10. In the Ellipse inverted.

9. In the Sphere folded inwards.

8. In a Cone closed.

7. Divergent.

PARASOL FLOWERS.

by the slightest breath of the wind, and plant themselves in the most inconsiderable crevice of a wall. The seeds of the largest mountain-trees are no less volatile. That of the maple has two membranous pinions similar to the wings of a fly. That of the elm is cased in the midst of an oval thin leaf. Those of the cypress are almost imperceptible. Those of the cedar are terminated by broad and thin plates, which in their aggregated state compose a cone. The grains are in the centre of the cone; and when arrived at maturity, the thin membranes to which they adhere separate from each other, like the cards in a pack, and each of them flies off with it's own little kernel. (*See the annexed Plate.*)

The seeds of mountain-plants which appear too heavy for flying, are furnished with other resources. The pease of the balsamine have pods whose elasticity darts them to a considerable distance. There is likewise a tree in India, the name of which I do not now recollect, that in like manner discharges it's seeds with a noise like that of a musket fired off. Those which have neither tufts, nor pinions, nor springs, and which, from their weight, seem condemned to remain at the foot of the vegetable which produced them, are in very many cases those which travel the farthest. They fly off with the wings of a bird. It is thus that a multitude of berries and shell-fruits resow themselves. Their seeds are inclosed in stony incrustations, not capable of being digested. They are swallowed by the birds, who carry them off, and plant them in the cornices of towers, in the clefts of rocks, on the trunks of trees, beyond rivers, nay be-

yond oceans. By such means it was that a bird of the Moluccas re-peopled with the nutmeg plant, the desert islands of that archipelago, in defiance of all the efforts of the Dutch, who destroy those trees in every place where they cannot be subservient to their own commerce.

This is not the place for bringing forward the relations which vegetables have to animals. It is sufficient to observe as we go along that most birds re-sow the vegetable which feeds them. Nay we find, without going from home, quadrupeds which convey to a great distance the seeds of the grasses. Such among others as do not chew the cud, horses for instance, whose dung is hurtful to the meadows, for an obvious reason, they introduce into them a variety of foreign herbs, as the heath and the short furze, the seeds of which they are unable to digest. They re-sow, besides, a great many others, which adhere to their hair, by the motion of their tail simply. There are quadrupeds of small size, such as the dormouse, the hedge-hog, and the marmot, which convey to the most elevated regions of the mountains, acorns, beech-mast, and chestnuts.

It is singularly worthy of remark that volatile seeds are produced in much greater number than those of other species ; and in this we are called upon to admire the intelligence of that Providence which foresaw every thing, and arranged all accordingly. The elevated situations for which they are destined, were exposed to be speedily stripped of their vegetables, by the declivity of their soil, and by the rains, which have a continual tendency to lower them. By means of
the

the volatility of grains, they are become of all the places of the Earth the most prolific in plants. In the mountains is deposited the Botanist's treasure.

It cannot be too frequently repeated, The remedies provided by Nature always surmount the obstacles which she has opposed; and her compensations ever exceed her gifts. In truth, if you except the inconveniencies of declivity, a mountain presents to plants the greatest variety of exposures. In a plain they have the same Sun, the same degree of humidity, the same soil, the same wind; but if you ascend a mountain, situated in our Latitude only twenty-five fathoms of perpendicular height, you change your climate as much as if you had travelled twenty-five leagues northward; so that a mountain of twelve hundred fathoms perpendicular height, would present us with a scale of vegetation as extensive as that of twelve hundred leagues along the Horizon, which is nearly our distance from the Pole: both the one and the other would terminate in a region of perpetual ice. Every step we take upon a mountain, whether ascending or descending, gives us a change of Latitude; and if we encompass it round and round, every step changes our Longitude. We shall fall in with points where the Sun rises at eight o'clock in the morning; others, at ten o'clock; others, at noon. We should find an infinite variety of exposures; of cold toward the North, of heat to the South, of rain to the West, of drought to the East; without taking into the account the different reflections of heat in sands, rocks, bottoms of vallies, and lakes, which modify them a thousand various ways.

We

We must proceed farther to observe ; and Who can do it without profound admiration ? that the season of the maturity of most volatile seeds takes place toward the commencement of Autumn ; and that from an effect of the universal Intelligence, which constrains all the parts of Nature to act in concert. Then it is that we have the most violent gales of wind, about the end of September or beginning of October, called the equinoctial winds. These winds blow in all parts of the Continents, from the bosom of the seas to the mountains which are in correspondence with them. Not only do they convey thither the volatile grains which have then attained to a state of maturity, but likewise blend with these thick clouds of dust, which they carry off from lands dried up by the burning heats of Summer, and particularly from the shores of the Sea, where the incessant motion of the billows, which there break, and continually toss the pebbly strand backward and forward, reduce the hardest bodies to an impalpable powder.

Those emanations of dust are in many places so copious, that I could produce a variety of instances of vessels covered with them, as they were crossing gulfs, though more than six leagues distant from land. They are so troublesome in the loftier provinces of Asia, that all travellers who have visited Peking assure us it is impossible to walk the streets of that city, for a considerable part of the year, without having the face veiled. Thus there are rains of dust which repair the summits of the mountains, as there are rains of water which feed their sources. Both the one and the other issue from the Sea, and return to it by the course

course of the rivers, which are perpetually conveying thither their constant tribute of waters and sands. The maritime winds unite their efforts toward the autumnal equinox, transport from the circumference of the Continents, to mountains the most remote from them, the seeds and the manure which had flowed from thence, and sow meadows, groves, and forests, on the sides of precipices, and on the most inaccessible peaks. Thus the leaves, the stems, the seeds, the birds, the seasons, the seas, and the winds, concur, in a most wonderful manner, to keep up the vegetation of the mountains.

I have been mentioning the relations of plants to mountains ; I am mortified that it is not in my power here to insert the relations which mountains themselves have with plants, according to my original intention. All that I can at present say on this subject is, that so far are mountains from being the productions of a centrifugal force, or of fire, or of earthquakes, or of water-courses, I know of at least ten different species, each of which has a configuration the most perfectly adapted for keeping up, in every particular Latitude, the harmony of the elements relatively to vegetation. Each of them has moreover vegetables and quadrupeds peculiar to itself, and which are not elsewhere to be found. This proves to a demonstration, that they are not the work of chance. Finally, among that inconceivable number of mountains which cover the greatest part of the five Zones, and especially the Torrid and the Icy Zones, there is but one single species, the least considerable of all, which presents to the water-courses projecting and retreating

treating angles in correspondence. This however is no more their work than the basin of the seas is itself the work of the Ocean. But this interesting subject, of an extent too considerable to admit of it's being here introduced, belongs, besides, to the province of Geography.

Let us now proceed to display the harmony of aquatic plants.

These have dispositions entirely different in their leaves, the bearing of their branches, and, above all, in the configuration of their seeds. Nature, as has already been observed, in order to vary her harmonies, only employs in very many cases positive and negative characters. She has bestowed an aqueduct on the pedicle of the leaves of mountain-plants; she withdraws it from those which grow by the side of the waters, and transforms them into aquatic plants. These, instead of having their leaves hollowed out into gutters, are clothed with leaves smooth and sleek, such as the corn flag, which bears them in form of a poignard's blade, or swelling in the middle like a sword-blade, as those of the species of reed called typha, that common sort, the stem of which the Jews put into the hand of JESUS CHRIST. Those of the nymphæ or plane, and rounded in form of a heart. Some of these species affect their forms, but their long tails are uniformly destitute of a canal. Those of the bulrush are round like a pipe. There is an endless variety of rushes on the brink of morasses, rivulets, and fountains. You will find them of all sizes, from those which have the fineness of a hair, up to the species which grow in the river of Genoa, as large as a cane.

cane. Whatever difference there may be in the jointing of their stalks and of their pannicles, they all have in their plan a round or elliptical form. You will find those species alone which grow in parched situations to be fluted and hollowed on their surface. When Nature intends to render aquatic plants susceptible of vegetation on the mountains, she bestows aqueducts on their leaves; but when on the contrary she means to place mountain-plants by the water's-side, she withdraws it. The aloës of the rock has it's leaves hollowed into a scoop; the aloës of the water has them full. I am acquainted with a dozen species of mountain-fern, every one of which has a small fluting along it's branches, and the only species of the marshes, which I know, wants it. The bearing of it's branches is likewise very different from that of the others. The first rears them toward Heaven, the last bears them almost horizontally.

If the leaves of mountain-plants are constructed in the best manner possible for collecting at their roots the waters of Heaven, which they have not always at command; those of aquatic plants are frequently disposed in such a manner as to remove them, because they are destined to grow in the bosom of water, or in it's vicinity. The leaves of trees which love the water's side, as the birch, the aspin, and the poplar, are attached to long and pendent tails. There are others which bear their leaves disposed in form of tiles, as the great chestnut of India and the walnut. Those of plants which grow in the shade, around the trunk of trees, and which derive by their roots the humidity collected by the foliage of the tree, as the french-

french-bean and the convolvulus, have a similar bearing. But those which grow entirely under the shade of trees, and which have scarcely any roots, as mushrooms, have leaves that so far from pointing toward Heaven are turned downward to the earth. The greatest part are formed on the upper side into a thick parasol, to prevent the Sun from drinking up the moisture of the soil in which they grow; and they are divided on the under side into thin leafy plates, for receiving the vapours which exhale from the ground, nearly as those of the horizontal wheel of a fire-engine receives the steam of the boiling water which makes it to turn about. They have besides several other means of watering themselves by these exhalations. There are many numerous species lined with tubes, others are stuffed with sponges. There are some whose pedicle is hollow inwardly, and which, bearing a chapter a-top, there collect the emanations of their soil as in an alembic. Thus there is not a particle of vapour in the Universe that goes to waste.

What has just now been said of the inverted forms of mushrooms, of their leafy plates, of the tubes and sponges with which they are lined, for receiving the vapours exhaled from the ground, confirms what was advanced respecting the use of the leaves of mountain-plants, hollowed into gutters, or constructed into the form of a pencil, or of a fan, for receiving the waters of Heaven. But aquatic plants, which had no need of such recipients, because they thrive in water, have, if I may so express myself, a repulsive foliage. I shall here present an object of comparison, calculated to produce conviction of the truth of those principles :

ciples : for example, the mountain-box-tree, and the caper-plant of the rocks, have their leaves hollowed into a spoon form, with the concavity turned toward Heaven ; but the *vaccinium* of the marshes, (cranberry) or *vaccinia palustris*, which is likewise furnished with concave leaves, bears them inverted, with the cavity turned toward the earth. From this negative character, I was enabled to distinguish, as a plant of the marshes, a very rare plant in the Royal Garden, which I saw for the first time. It is the *lætum palustre*, which grows in the marshes of the Labrador country. It's leaves, formed like little coffee-spoons, are all inverted ; their convex side being turned toward Heaven. The water-lentil of our marshes, as well as the typha of our rivers, has the middle of it's leaf swelled.

Botanists, on observing leaves nearly similar to plants, on the brink of the water, and on the heights of mountains, never entertained a suspicion that they could answer purposes so different. Many of them no doubt are persons of profound erudition ; but their learning is rendered entirely useless to them, because their method constrains them to proceed in one single track, and their system indicates to them only one kind of observations. This is the reason that their most numerous collections frequently present nothing but a mere vocabulary. The Study of Nature is spirit and intelligence simply. Her vegetable order is an immense volume of which plants form the thoughts, and the leaves of those very plants, the letters. Nay there is not a very great number of primitive forms in the characters of this alphabet : but

by means of their various assemblages the forms, as we do with ours, an infinite number of different thoughts. As it is with language, in order totally to alter the meaning of an expression, all that she has in many cases to do, is to change an accent. She places rushes, reeds, arums with a fleck foliage and a full pedicle, on the banks of rivers : she traces an aqueduct in the leaf, and transforms them into rushes, reeds, and arums of the mountains.

We must at the same time be carefully on our guard against generalizing those means ; otherwise they will quickly betray us into a misapprehension of her procedure. For example, certain Botanists having suspected that the leaves of some plants might very well be adapted for collecting the rain water, believed that they had a perception of this use in that of the *dipsacus*, or fullers-thistle. It was very easy to fall into a mistake here, for the leaves are opposite, and meet at their bases ; so that after it has rained they present reservoirs, which contain one with another a good half-glass of water, and which are disposed in stories along it's stem. But they ought to have considered, first, that the *dipsacus* grows naturally on the brink of waters, and that Nature does not bestow cisterns of water on aquatic plants. This would be, according to the proverb, to carry water to the river. Secondly, they might have observed that the tiers formed by the opposite leaves of the *dipsacus*, so far from being reservoirs, are on the contrary dischargers, which convey off the rain water from it's roots, to the distance of nine or ten inches on every side by the extremities of it's leaves. They resemble,

resemble, in some respects, the gutters which project from the roofs of our houses, or those which are formed by the corners of our hats, which serve to carry away the rain water from the body and not to throw it inward. Besides, the water which remains in the cavity of the leaves of the *dipsacus* never can get down to the root of the plant, for it is detained there as at the bottom of a vase. It would not even be proper for moistening it, for *Pliny* insists that it is brackish. The birch-wort, which grows in the trembling and frothy marshes of Canada, carries at its base two leaves, formed like the halves of a trumpet sawed asunder lengthwise. They are both concave, but have at the extremity that is farthest from the plant a kind of bill, shaped like a spout. The water which remains in the receivers of these aquatic plants, is perhaps destined to supply drink to the small birds, which sometimes find themselves not a little embarrassed how to come at it in the time of inundations.

It is necessary carefully to make a distinction between the elementary and the relative characters of plants. Nature obliges the man who studies her not to hold to external appearances, and in order to form his understanding, she makes him rise from the means which she employs, to the ends which she proposes. If certain aquatic plants seem to present in their foliage some of the characters of mountaineers, there are upon the mountains, some which seem to present characters similar to those of the waters; such, for example, is the broom. It bears leaves so small, and so few in number, that they appear insufficient for collecting the water necessary to its growth, and so

much the more that it thrives in soils the most parched. Nature has indemnified it in another manner. If it's leaves are small, it's roots are very long. They go in quest of coolness to a great distance. I have seen some of them extracted from the earth, which were more than twenty feet in length, and it was necessary after all to break them off, it being impossible to reach the extremities. This prevents not the scanty leaves from exhibiting the mountain-character; for they are concave, they point toward Heaven, and are lengthened out like the under bill of a bird.

The greatest part of aquatic vegetables throw the water off from them, some by their port; such as the birch, the branches of which, so far from rearing themselves toward Heaven, fall downward, in form of an arch. The same thing may be affirmed of the great chestnut and of the walnut, unless these trees should have changed their natural attitude, by growing in thirsty situations. Their bark is usually sleek, as that of the birch, or scaly, like that of the chestnut; but not hollowed into canals, as that of the elm or the mountain pine. Others have in themselves a repulsive quality: such are the leaves of the nymphæa, and of several species of colewort, on which the drops of water collect into globules like the particles of quicksilver. Nay there are some which it is extremely difficult to moisten, such as the stems of many species of capillary plants. The laurel, we are told, carries it's repulsive quality to such a degree as to repel the thunder. If this quality, so highly extolled by the Ancients, is really possessed by the laurel, we must undoubtedly ascribe this to it's nature

as a fluviatic plant. The laurel grows in abundance on the banks of the rivers of Theffaly. A traveller, whose name is the *Sieur de la Guilletière*,* says, in a relation written in a very lively and agreeable manner, that he never saw any where such fine laurels as along the side of the river Peneus. Hence perhaps was suggested the idea of the metamorphosis of *Daphne*, the daughter of that river-deity, transformed by *Apollo* into a laurel.

This repulsive property of certain trees, and of some aquatic plants, induces me to think that they might be employed around our habitations, as a security against thunder-storms, and that in a manner more certain, and much more agreeable, than electrical conductors, which dissipate, only by attracting them to the neighbourhood. They might farther be very advantageously employed for drying marshy grounds; as the attractive qualities of many mountain-vegetables might be used in forming fountains upon heights, by collecting there the vapours which float in the air. There is not perhaps an infectious morass on the Globe, except in places where men have injudiciously destroyed the plants whose roots absorbed the humidity of the Earth, and whose foliage repelled that of the Heavens.

I pretend not to affirm however that the foliage of aquatic plants has no farther uses: for where is the man who has entered into the endless views of Nature? "To whom hath the root of wisdom been revealed? or who hath known her wise counsels?" *Radix sapientiæ cui revelata est? et astutias illius quis*

* See the Voyage to Lacedemon, by the *Sieur de la Guilletière*:

*agnovit?** In general, the leaves of aquatic plants appear, from their extreme mobility, very much adapted to the purpose of renewing the air of humid places, and of producing, by their movements, that drying of the ground to which I have just alluded. Such are those of reeds, of poplars, of aspens, of birches, and even of willows, which are sometimes in motion though there is not the slightest degree of wind perceptible.

It is farther remarkable that most of these vegetables emit a very pleasing smell; among others, the poplar and the birch, especially in the Spring: and that a great number of aromatic plants thrive by the water's-side, as mint, sweet marjoram, ciperus, the sweet-smelling rush, the iris, the *calamus aromaticus*: and, in the Indies, the spice-plants, such as the cinnamon-tree, the nutmeg, and the clove. Their perfumes must contribute very powerfully to diminish the mephitic exhalations which are natural to marshy and humid places. They have likewise many uses relatively to animals, such as affording a shade to the fishes which resort thither in quest of a shelter from the scorching heat of the Sun.

But one conclusion we may certainly deduce in favour of our improvements in culture, from the observations now made; namely this, That in the cultivation of plants, the pedicle of whose leaves presents no impress of a canal, it is necessary to water them copiously; for in this case they are naturally aquatic. The nasturtium, the mint, and the sweet-marjoram, consume a prodigious quantity. But when plants are

* Ecclesiasticus, chap. i. ver. 6.

provided with a canal, they must be watered more sparingly, for this demonstrates them to be originally natives of the mountains. The deeper this canal is, the less artificial watering do they require. Every gardener knows that if you frequently water the aloes, or the taper of Peru, you kill them.

The seeds of aquatic plants have forms not less adapted than those of their leaves, to the places where they are destined to grow; they are all constructed in a manner the most proper for sailing off. Some of them are fashioned into the figure of shells, others into boats, rafts, skiffs, single and double canoes, similar to those of the South-Seas. I can have no doubt that by an attentive study of this part alone, a great number of very curious discoveries might be made, respecting the art of crossing currents of every sort; and I am persuaded that the first men, who were much better observers than we are, copied their different methods of travelling by water, after those models of Nature, of which we with all our pretensions to discovery are but feeble imitators.

The aquatic, or maritime pine, has it's kernels inclosed in a kind of little bony shoes, notched on the under side, and covered over on the upper, with a piece resembling a ship's hatch. The walnut, which delights so much in the banks of rivers, has it's fruit contained in two little boats whose apertures are perfectly fitted to each other. The hazel, which becomes so bushy on the brink of rivulets; and the olive, which is enamoured of the sea-shore to such a degree that it degenerates in proportion as you remove it thence, carry their seed inclosed in a species of little

casks, capable of holding out the longest voyages. The red berry of the yew, whose favourite residence is the cold and humid mountain, by the side of a lake, is hollowed into a little bell. This berry on dropping from the tree, is at first carried down by it's fall to the bottom of the water : but it returns instantly to the surface, by means of a hole which Nature has contrived, in form of a navel, above the seed. In this aperture is lodged a bubble of air, which brings it back to the surface of the water, by a mechanism more ingenious than that of the divers-bell in this, that the vacuum of the diving-bell is undermost, and in the berry of the yew it is uppermost.

The forms of the seeds of aquatic-plants are still more curious ; for, universally, Nature redoubles her skill and exertions in favour of the little and the weak. That of the bulrush resembles a lobster's eggs ; that of fennel is a real canoe in miniature, hollowed in the middle, with both ends raised into a prow. There are others grooved into each other, resembling pieces of wood disposed for a float, and worm-eaten ; such are those of the horned poppy. Those which are destined to thrive on the brink of waters destitute of current, are wafted by sails ; such is the seed of a scabious plant of our own country which grows on the border of morasses. Besides the difference of this from the other species of scabious, whose seeds are crowned with pronged hairs, in order to fasten themselves on the hairs of the animals which transplant them, the one last-mentioned is overtopped by a half-bladder open, and resting on it's summit like a gondola. This half-bladder serves it at once as a sail by
water,

water, and as a vehicle by land. These means of natation, though endlessly varied, are common in all climates to the grains of aquatic plants.

The almond of the river of the Amazons, known by the name of *totoca*, is inclosed in two shells, exactly similar to those of an oyster. Another fruit on the strand of the same river, which abounds in almond-trees, has a perfect resemblance in colour and form to an earthen pot, with its little lid;* it goes by the name of the monkey's porridge-pot. Others are formed into large bottles, as the fruit of the great gourd. There are seeds incrusted in a coat of wax, which makes them float, such are the berries of the wax-tree, or royal pimenta of the shores of Louisiana. The formidable apple of the mancenilla, which grows on the sea-shore of the islands situated between the Tropics, and the fruit of the manglier, which grows there actually in the salt-water, are almost ligneous. There are others with shells similar to the sea-urchin, without prickles. Many are coupled, and perform their voyage like the double canoe, or balsa, of the South-Sea. Such is the double cocoa of the Seehelles Islands.

If you examine the leaves, the stems, the attitudes, and the seeds of aquatic plants, you will always remark in them characters relative to the places where they are destined to grow, and in harmony with each other; so that if the seed has a nautical form, its leaves are deprived of an aqueduct; just as in moun-

* See engravings of most of those seeds, in *John de Læet's History of the West-Indies*.

tain-plants, if the grain is volatile, the pedicle of the leaf, or the leaf altogether, presents a channel.

I shall assume, as an instance of the nautical harmonies of plants, the nasturtium, with which every one is acquainted. This plant, which bears flowers so agreeable, is one of the crosses of the rivulets of Peru. It must be observed, first, that the foot-stalks of it's leaves have no conduit, like those of all aquatic plants; they are inserted in the middle of the leaf, which they support like an umbrella, to ward off from them the water which falls from Heaven. It's seed, when fresh, has exactly the form of a boat. The upper part is raised into a slope, like a bridge to let the water run off; and you distinguish perfectly, in the lower part, a poop and a prow, a keel and a bottom. (*See the annexed Plate.*) The little furrows of the seed of the nasturtium are characters common to most nautical grains, as well as the triangular forms, and those of the kidney or keel. Those furrows undoubtedly prevent them from rolling about in all directions, constrain them to float along lengthwise, and give them the direction the best adapted to the track of the water, and to the passage of the narrowest straits. But they have a character still more general; it is this, that they swim in their state of maturity, which is not the case with grains destined to grow in the plains, such as pease and lentils, which sink to the bottom.

Some species of these, nevertheless, such as the french-bean, sink at first to the bottom, and rise to the surface when penetrated with the water. Others,
on

LEAVES WITH AN AQUEDUCT, AND VOLATILE FRUITS OF MOUNTAIN VEGETABLES.

Leaves & Seeds of the Mountain Maple.



Spartha,
or rush of the Spanish
Mountains.

Rush of the
Marshes.

Leaf & Cone
of the Cedar
of Lebanon.



Stump of the
Spartha, with
its Gutter.



Kernel of the Cedar
attached to its Wing.

Leaf & Seeds
of the
Dandelion.



Full Stump
of the Rush of
the Marshes.



on the contrary, float at first, and sink afterward. Such is the Egyptian bean, or the seed of the colochasia, which grows in the waters of the Nile. In order to sow it, you are under the necessity of rolling it up in a ball of earth; and in that state it is thrown into the water. Without this precaution, not one would remain on the shores where you would wish it to grow. The natability of aquatic seeds is, undoubtedly, proportioned to the length of the voyages which they have to perform, and to the different gravity of the waters in which they are destined to swim. There are some which float in sea-water and sink in fresh, which is lighter than sea-water by one thirty-second part: such precision is in the balancing of Nature! I believe that the fruit of the great India chestnut, which thrives on the shores of the salt creeks of Virginia are in this situation. In a word, I am so entirely convinced of all the relations which Nature has established among her Works, as to conclude, that the time when the seeds of aquatic plants drop, is regulated, in most cases, by that of the overflowing of the rivers where they grow.

It is a speculation well worthy of the attention of the philosophic mind, to trace those vegetable fleets sailing along night and day with the current of the rivulets, and arriving, undirected by any pilot, on unknown regions. There are some which, by the overflowing of the waters, now and then lose themselves in the plains. I have seen them sometimes accumulated upon each other, in the bed of torrents, presenting around the pebbles where they had germinated, waves of verdure of the most beautiful sea-green.

green. You would have thought that *Flora*, pursued by some River-god, had dropped her basket in the urn of the deity. Others, more fortunate, issuing from the sources of some stream, are caught by the current of the greater rivers, and conveyed away to embellish their distant banks with a verdure not their own.

There are some which cross the vast Ocean ; and, after a long navigation, are driven by the very tempests on the regions which they adorn and enrich. Such are the double cocoas of the Sechelles, or Mahé Islands, which the Sea carries regularly every year a distance of four hundred leagues, and lands them on the coast of Malabar. The Indians who inhabit it were long under the persuasion, that those annual presents of the Ocean must have been the produce of palm-trees that grew under it's billows. They gave them the name of marine cocoa-nuts ; and ascribed wonderful virtues to them. They set as high a value upon them as upon ambergris ; and to such a pitch was this extravagance carried, that many of those fruits have been sold as high as a thousand crowns a-piecc. But the French having some years ago discovered the Island of Mahé, which produces them, and which is situated in the fiftieth degree of South-Latitude, imported them in such quantities to India, that they sunk at once in value and in reputation ; for men in every country prize those things only which are rare and mysterious.

In every island where the eye of the traveller has been able to contemplate the primordial dispositions of Nature, he has found their shores covered with
vegetables.

vegetables, all the fruits of which possess nautical characters. *James Cartier* and *Champlain* represent the strands of the lakes of North-America as shaded by stately walnut-trees. *Homer*, who has so attentively studied Nature, at times when, and in places where, she still retained her virgin beauty, has planted the wild-olive along the shores of the island on which *Ulysses*, floating upon a raft, is thrown by the tempest. The navigators who have made the first discoveries in the seas of the East-Indies, frequently found in them shallows planted with cocoa-trees. The Sea throws such quantities of fennel-seed on the shores of Madeira, that one of it's bays has obtained the name of Funchal, or Fennel-Bay.

It was by the course of those nautical seeds, too carelessly observed by modern Scamen, that the Savages formerly discovered the islands to windward of the countries which they inhabited. They formed conjectures respecting a tree at a great distance, on seeing it's fruit cast upon their shores. By similar indications *Christopher Columbus* acquired the assurance that another world existed. But the regular winds and currents from the East, in the South-Sea, had carried them long before to the Nations of Asia; of which I shall say something toward the end of this Study.

There are besides vegetables of an amphibious nature. They are disposed in such a manner, that one part of their foliage raises itself toward Heaven, and the other forms an arcade and bends downward to the ground. Nature has given to their seeds, likewise, the power of at once flying and swimming.

Such

Such is the willow, the seed of which is enveloped in a cobweb down, which the winds transport to a great distance, and which floats along the surface of the water without wetting itself, like the downy feathers of the duck. This down is composed of small capsules, like the bottom of a lamp, and with two beaks filled with seeds, which are crowned with a plume: so that the wind conveys those capsules through the air, and likewise transports them by sailing along the face of the water. This configuration was admirably adapted to be the vehicles of the seeds of plants which grow by the side of stagnant waters and lakes. The same thing holds as to the seeds of the poplar; but those of the alder, which grows on the banks of rivers, have no plumage, because the current of the stream is designed to convey them from place to place.

The seeds of the fir, and of the birch, have at once volatile and nautical characters; for the fir has its kernel attached to a membranous wing; and the birch has its grain embraced by two wings, which give it the appearance of a little shell. These trees grow at once on the wintry mountains, and on the margin of the lakes of the North; their seeds had occasion not only to sail over stagnant waters, but to be transported through the air over the snows, in the midst of which they take delight. I have no doubt that there may be species of these trees the seeds of which are altogether nautical. Those of the linden-tree are carried in a spherical body, similar to a little bullet. This bullet is affixed to a long tail, from the extremity of which descends obliquely a follicle of considerable length, whereby the wind carries it away
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to a great distance, spinning it round and round. When it drops into the water, it plunges about the length of an inch, and serves in some sort as ballast to it's tail, and to the little leaf attached to it, which being thus brought to a vertical situation, perform the functions of a mast and a sail. But the examination of so many curious varieties would carry me too far.

This would be the proper place to speak of the roots of vegetables ; but I am little acquainted with what passes under ground. Besides, in all Latitudes, on heights as well as by the water's-side, we find the same substances nearly, muds, sands, pure mould, rock, which must produce a much greater resemblance in the roots of plants than in the other parts of their vegetation. I have no doubt however that Nature has established, on this subject, relations, the knowledge of which would be highly useful, and that a cultivator somewhat experienced, might be able by inspecting the root of a vegetable, to determine the species of soil best adapted to it. Those which are very hairy seem most proper for sandy grounds. The cocoa tree, which grows to a very large size on the shores of the Torrid Zone, thrives in pure sand, which it interlaces with such a prodigious quantity of hairy fibres, as to form a solid mass around it. It is on this basis that it effectually resists the most violent tempests, in the midst of a moving soil. What is singularly remarkable in the case of this plant, it never succeeds so well as in the sand on the sea-shore, and generally languishes in the interior of a country.

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The Maldivia Islands, which are for the most part nothing but sandy shallows, are the most renowned regions of all Asia, for the abundance and the beauty of their cocoa trees. There are other vegetables of the shores the roots of which are drawn out like cords. This configuration renders them exceedingly proper for binding together the ground, and thereby defending it against the inroads of the watery element. Such are, among ourselves, the alder, the reed, but, above all, a species of dogs-grass, which I have seen very carefully cultivated in Holland along the dikes.

Bulbous plants appear in like manner to take pleasure in soft muds, into which they cannot penetrate very far, from the roundness of their bulbs. But the elm extends its roots at pleasure on the declivity of the mountain; and the oak inserts his sturdy pivots into it, to lay hold of the successive strata of which it is composed. Other plants preserve, on the high grounds, by their creeping foliage and their superficial roots, the emanations of dust which the winds there deposit. Such is the *anemone nemerosa*. If you find a single foot of it on a hill, in a wood not greatly frequented, you may rest assured that it diffuses itself like a net-work through the whole extent of that wood.

There are trees, the trunks and the roots of which are admirably contrasted with obstacles which appear to us accidental, but which Provident Nature foresaw. For example, the cypress of Louisiana grows with its foot in the water, chiefly on the banks of the Méchassippi, whose vast shores it magnificently shades. It
rises

rises there to a height which surpasses that of almost any of the trees of Europe.* Nature has given to the trunk of this stately tree a circumference of more than thirty feet, to enable it to resist the ices from the lakes of the North, which discharge themselves into that river, and the prodigious rafts of timber which float down it's stream, and which have obstructed most of it's mouths to such a degree as to interrupt the navigation to vessels of any considerable burthen. And to put it beyond a doubt that she designed the thickness of it's trunk for withstanding the flock of floating bodies, it is remarkable that at the height of six feet, she suddenly diminishes the size of it at least a third, the full magnitude having become superfluous at that degree of elevation: and for the purpose of securing it in another manner still more advantageous, she raises out of the root of the tree at four or five feet distance all around, several large stumps from one foot to four feet high. These are not shoots; for their head is smooth, and bears neither leaves nor branches: they are real ice-breakers.

The tupelo, another great tree of Carolina, which grows likewise by the water's-side, but in creeks, has nearly the same dimensions at it's base, excepting the ice-breakers, or pallisades. The seeds of those trees are fluted, as I have already observed to be the case with aquatic seeds in general; and that of the eypress of Louisiana differs considerably, by it's nautical form, from that of the eypress of the mountains of Europe, which is volatile. These observations are so

* See Father *Charlevoix*, his History of New France, vol. iv.

much the more worthy of credit, that Father *Charlevoix*, who in part relates them, deduces no consequence whatever from the facts, though he was abundantly capable of interpreting their use.

It must now be apparent of what importance it is to connect the study of plants with that of the other Works of Nature. It is possible to ascertain, by their flowers, the exposure to the Sun which is best adapted to them; by their leaves, the quantity of water that is necessary to vegetation; by their roots, the soil which is most suitable; and by their fruits, the situations in which they ought to be placed, together with new relations to the animals which feed upon them. By fruit I mean, as Botanists likewise do, seed of every species.

The fruit is the principal character of the plant. Of this we may form a judgment, first, from the care which Nature has bestowed on it's formation and preservation. It is the ultimate term of her productions. If you examine, in a vegetable, the different envelopes which enlose it's leaves, it's flowers, and it's fruits, you will perceive a most wonderful progression of pains and precautions. The simple leaf-buds are easily distinguishable from the simplicity of their cases. Nay there are plants which have none at all, as the shoots of the graminaceous, which start immediately out of the earth, and stand in no need of any foreign protection. But the buds which contain flowers are provided with sheaths, or lined with down, as those of the apple-tree; or cased over with glue externally, as those of the great India chestnut; or are inclosed in bags, as the flowers of the narcissus;

cissus ; or secured in some way or another, so as to be very distinguishable even before their expansion.

You afterwards perceive that the care employed in dressing out the flower was entirely destined to the fecundation of the fruit ; and that when this is once formed, Nature redoubles her precautions, both externally and internally, for it's preservation. She gives it a placenta, she envelops it in pellicles, in shells, in pulps, in pods, in capsules, in husks, in skins, and sometimes in a case of thorns. A mother cannot pay more attention to the cradle of her infant. In process of time, in order that her grown child may be enabled to go abroad, and look for a settlement in the world, she crowns it with a tuft of plumage, or incloses it in a shell : furnishes it with wings to fly away through the air, or with a bark to sail off along the face of the water.

There is something still more marked to arrest our observation in favour of the fruit. It is this, that Nature frequently varies the leaves, the flowers, the stems, and the roots of a plant ; but the fruit remains constantly the same, if not as to it's form, at least as to it's essential substance. I am persuaded that when she was pleased to create a fruit, it was her intention that it should have the power of re-producing itself on the mountains, in the plains, amidst rocks, in sands, on the brink of waters, and under different Latitudes ; and in order to adapt it to it's situation, she varied the watering-pot, the mirror, the prop, the attitude, the buttress, and the fur of the vegetable, correspondingly to the Sun, to the rains, to the winds, and to the soil. To this intention,

I believe, we ought to ascribe the prodigious variety of species in every genus, and the degree of beauty which each attains when in the situation that is natural to it. Thus, in forming the chestnut to reach perfection on the stony mountains of the South of Europe, and to supply the want of corn, which scarcely ever succeeds there, she placed it on a tree which in those regions attains magnificence from its adaptations.

I have eaten of the fruit of the chestnut-tree of the Island of Corsica. It is as large as small hen's eggs, and makes excellent food. You may read in a modern traveller the description of a chestnut-tree which grew in Sicily, on one of the ridges of Mount *Ætna*. Its foliage is of such extent that a hundred cavaliers could repose with ease under its shade. For that reason it obtained the name of *centum cavallo*. Father *Kircher* assures us that he had seen on the same mountain, in a place called *Trecaftagne*, three chestnut-trees of such a prodigious size, that when they were felled you might have lodged a large flock of sheep under covert of their bark. The shepherds employed them for this purpose in the night-time, and in bad weather, instead of penning up their charge in the fold. Nature has granted to this stately vegetable the faculty of collecting, on the steep mountains, the waters of the Atmosphere, by means of leaves formed like so many tongues; and of penetrating, by means of its sturdy roots, down to the very bed of fountains in despite of lavas and rocks.

Nature has been pleased, elsewhere, to produce the fruit of this tree with a degree of bitterness, for the
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use of some animal no doubt, on the brink of the salt-water creeks and arms of the Sea in Virginia. She has bestowed on the tree which bears it leaves disposed in form of a tile; a scaly bark, flowers different from those of the European chestnut-tree, but adapted unquestionably to the humid exhalations; and to the aspects of the Sun to which it is exposed. In a word, she has transformed it into the great India chestnut. It arrives at much greater beauty in it's native country than in Europe. That of America is the maritime chestnut-tree; and that of Europe is the chestnut-tree of the mountains. She has placed, perhaps by a different kind of combination, this fruit, on the beech-tree of our hills, the mast of which is evidently a species of chestnut.

Finally, by means of one of those maternal attentions which have induced her to suspend, even on herbs, the productions of trees, and to serve up the same dishes on the smallest tables, she has placed before us the same fruit in the grain of the black corn, which in it's colour, and it's triangular form, resembles the seed of the beech, called in Latin *fagus*, whence this species of corn has obtained the name of *fagopyrum*. One thing at any rate is certain, namely, that independent of the mealy substance, we find in the black corn, in the beech-mast, and in the chestnut, similar properties, such as that of cooling excessive heat of urine.*

It was in like manner the intention of Nature to produce the acorn in a great variety of exposures. *Pliny* enumerated, in his time, thirteen different spe-

* See *Chomel's Treatise on Common Plants*.

cies in Europe, one of them, which makes very excellent food, is that of the green oak. It is of this that the Poets speak when they celebrate the felicity of the Golden Age, because it's fruit then served as an aliment to Man. It is worthy of being remarked that there is not a single genus of vegetable, but what gives in some one of it's species, a substance capable of being converted into nourishment for mankind. The acorn of the green oak is, among the fruits of this genus of trees, the portion reserved for our use. Nature has been pleased, after making this provision for Man, to scatter the other species of the oak over the different soils of America, to supply the necessities of her other creatures. She has preserved the fruit, and has varied the other parts of the vegetable. She has placed the acorn, but with the leaves of the willow, on the plant which has for that reason got the name of the willow-leafed oak, and which thrives in that country by the water's-side.* She has placed it, together with small and pendent leaves affixed to pliant tails like those of the aspin, on the water-oak, which grows there in the marshes. But when she intended to plant them in dry and parched soils, she united to them leaves of ten inches in breadth, adapted to the reception of rain-water, such are those of the species known by the name of the black oak in that country.

It may be necessary farther to observe, that the place where any species of plant produces the finest fruit, determines it's principal genus. Accordingly, though

* See the figures of it in Father *Charlevoix*, his History of New France, vol. iv.

the oak has it's species scattered about every where, it must be considered as of the genus of mountain-trees ; because that which grows on the mountains of America, and there distinguished by the name of the chestnut-leaved oak, yields the largest acorns, and is one of the greatest trees in that part of the world ; whereas the water-oak, and the willow-leaved oak, rise to no great height, and produce very small acorns.

The fruit, as we have seen, is the invariable character of the plant. To it, accordingly, Nature has likewise attached the principal relations of the animal kingdom to the vegetable. It was her intention that an animal of the mountains should find the fruit on which he has been accustomed to live, in the plains, on the sand, among the rocks, when he is under the necessity of changing his country, and especially on the brinks of rivers, when he descends thither to quench his thirst. I am not acquainted with a single mountain-plant but what has some of it's species, with their corresponding varieties, scattered over all situations, but principally on the margin of waters.

The mountain-pine has it's kernels mounted on wings, and the aquatic pine has it's seed inclosed in a skiff. The seeds of the thistle, which grow on parched soil, are furnished with plumes to convey them from place to place : those of the fullers-thistle, which thrives by the water's-side, have none, because they had no occasion for any to assist them in swimming. Their flowers vary for similar reasons ; and though Botanists have two different genera of them,

the goldfinch fails not to acknowledge this last as a real thistle. He rests himself upon it, when he finds it convenient to go and cool himself on some watery bank. He forgets, on beholding his favourite plant, the sandy downs where he was born, and cheers the banks of the rivulet with the music of his song, and the beauty of his plumage.

It appears to me impossible to acquire any thing like a knowledge of plants unless by studying their geography, and their ephemeris. Without this double illumination, which mutually reflects, their forms will be for ever strange to us. The greatest part of Botanists however pay no manner of regard to this. In making their collections, they remark not the season at which plants grow, nor the place where, nor the aspect to which they are exposed. They carefully attend to all their intrinsic parts, and especially to their flowers; and after this mechanical examination, deposit them in their herbary, and imagine they have a thorough knowledge of them, especially if they have had the good fortune to dignify them by imposing some Greek name. They resemble a certain hussar of whom I have heard, who having happened to find a Latin inscription in characters of bronze, on an antique monument, disengaged them one after another, and tumbled them together into a basket, which he dispatched to an Antiquarian of his friends with a request that he would inform him what they meant. They no more lead us to an acquaintance with Nature, than a Grammarian would give us a relish for the genius of *Sophocles*, by presenting us with a naked catalogue of his tragedies,

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of the division of their acts and scenes, and of the number of verses which compose them. With equal absurdity are they chargeable who collect plants, without marking their relations to each other, and to the elements; they scrupulously preserve the letter, but suppress the sense. Far different was the manner in which a *Tournefort*, a *Vaillant*, a *Linnaeus*, prosecuted the study of Botany. If these learned men have not deduced any consequence from those relations, they have at least prepared the projecting stones of expectation, which promise the construction of a future fabric of science.

Though the observations which I have just made, respecting the elementary harmonies of plants, are but few in number, I have the confidence to affirm that they are of very high importance to the progress of agriculture. The point in question is not to determine geometrically the genera of flowers, whose mirrors are the best adapted for reflecting the rays of the Sun in every point of Latitude; the glory of calculating their curves is reserved for future *Newtons*. Nature has outrun our most ardent wishes in those places where she has been left at liberty to re-establish her own plans. We have it in our power to secure prosperity to ours, in a manner the most beneficial, by reducing them into harmony with her's. In order to ascertain what plants are best adapted to succeed in such and such a district, you have only to pay attention to the wild plants which thrive there spontaneously, and which are distinguishable for their vigor and for their multitude: then substitute in their place domestic plants, which have the same kind of

flowers and leaves. Wherever umbelliferous plants grow, you may put in their room such of our culinary vegetables as have most analogy with them, from their leaves, their flowers, their roots, and their grains, such as the daucus genus; the artichoke will there usefully replace the gaudy thistle; the domestic plumb-tree ingrafted on a wild stock of the same plant, in the very place where this last spontaneously sprung up, will become extremely vigorous. I am persuaded that by these natural approximations, advantage might be derived from the most barren sands and rocks; for there is not a single genus of wild plant but what contains a species fit for food.

But it was not sufficient for Nature to have established so many harmonies between plants, and the situations in which they were destined to vegetate, had she not likewise provided means for restoring them, when destroyed by the intolerant culture of Man. Let a piece of ground be left uncultivated for ever so short a space of time, and you will presently see it clothed with vegetables. They grow in that case in such numbers, and so vigorously, that there is no husbandman capable of producing an equal quantity, on the same spot, let him take what pains he will. These shoots however so vigorous and so rapid, which frequently take possession of our dock-yards of free-stone, of our walls of ashlar, and of our courts paved with granite, are in many cases only a provisional culture. Nature who is always advancing from harmony to harmony, till she has attained that point of perfection which she has proposed to herself, sows, at first, with grasses, and with herbage of different

ferent species, all abandoned soils, waiting for an opportunity of exerting her powers, to raise on that very spot vegetables of a higher order. On the rude neglected districts, where barren downs alone meet our eyes, posterity may behold stately forests arising.

We shall throw, as our custom is, a superficial glance on the very ingenious methods which Nature employs for preparing and conducting those vegetable progressions. We shall hence attain a glimpse at least, not only of the elementary relations of plants, but of those which exist between their different classes, and which extend even to the animal kingdom. Vegetables the most contemptible in the eyes of Man are frequently the most necessary in the order of Creation.

The principal means employed by Nature, for securing the growth of plants of every other species, are the thorny plants. It is very remarkable that plants of this description are the first which appear on lands in fallow, or in forests which have been cut down. They are in truth wonderfully well adapted to promote foreign vegetations, because their leaves with deep incisions, like those of the thistle and echium, or their sprigs bent into an arch, as those of the bramble, or their horizontal and interlaced branches, like those of the black-thorn, or their boughs bristled with briars and unprovided with leaves, as those of the sea-rush, leave underneath and around them many intervals through which other vegetables may arise, and find protection from the tooth of most quadrupeds. Nurseries of trees are frequently found in their bosom. Nothing is more common

common in coppice-woods than to see a young oak start out of a tuft of brambles, which enamels the earth all around with it's clusters of prickly flowers; or a young pine arise out of a yellow brake of marine-rushes.

When these trees have once acquired a certain degree of growth and size, they stifle by their shade those thorny plants, which subsist no longer, except along the skirts of the wood, where they enjoy air sufficient for their vegetation. But in this situation, such plants are still going on to extend the empire of their superiors from year to year over the plains. Thus, the thorny plants are the original cradles of the forests; and the scourge of the agriculture of Man is the bulwark of that Nature.

Man has however imitated, in this respect, the processes of Nature; for if he wishes to protect the newly sown seeds of his garden, he finds it frequently necessary to cover them with prickly branches of one sort or another. It appears to me probable, that there is not a heath but what in time might become a forest, were their commoners restrained from driving the flocks thither to pasture, for the cattle crop the tender shoots of the trees as fast as they spring up. This, in my opinion, is the reason why the declivities of the lofty mountains of Spain, of Persia, and of many other parts of the World, are not clothed with trees: it is because of the numerous flocks of sheep which are driven thither in Summer, and which roam over their different chains. I am fully convinced that those mountains were covered in the earlier ages of the World, with forests which were laid low by their

their first inhabitants ; and that they would resume their ancient clothing, though now naked and desert, were the cattle to pasture on them no longer. It is very remarkable that those elevated regions are sowed over with prickly plants, just as our heaths generally are.

Don *Garcias de Figuëroa*, Ambassador from Spain at the Court of *Cha-Abas*, King of Persia, relates, in the account which he has given of his journey, that the lofty mountains of Persia, which he crossed, and where the Turcomans are continually straying as they tend their fleecy charge, were covered with a species of thorny shrub, which grew luxuriantly in the most parched situations. This same shrubbery served as a retreat to a great number of partridges.

From this circumstance we take occasion to observe, that Nature employs the birds particularly to sow the thorny plants in places the steepest and most inaccessible. They are accustomed to retire thither in the night, and there deposit with their dung, the stony seeds of the bramble-berry, of the berry of the eglantine, of the barberry, and of most thorny shrubs, which, from relations no less wonderful, are indigestible in their stomach.

Birds have besides particular harmonies with those vegetables, as we shall make appear in it's proper place. Not only do they find on them a plentiful supply of food, and shelter under them, but downs for lining their nests, as on thistles, and on the cotton-tree of America ; so that if many of them resort for safety to the elevation of towering trees, others find

find in it the thorny brake. There is not a single bush but what has it's peculiar bird.

Independently of the plants proper to each situation, and which are there domesticated, there are some in a state of incessant peregrination, and flit round the earth, without settling in any fixed abode. We can easily have a conception of the cause of this constant removal, by supposing, what is actually the truth, that several of such plants shed their seeds only at the season when certain regular winds blow, or at certain revolutions of the currents of the Ocean. Whatever may be in this, I am of opinion that we must rank under this description, many plants which were known to the Ancients, but which are not now to be found. Such, among others, is the celebrated *lazerpitium* of the Romans, the juice of which, called *lazer*, sold for it's weight in silver. This plant, according to *Pliny*, grew in the vicinity of the city of Corenum, in Africa; but it had become such a rarity in his time as hardly any where to be seen. He tells us that a single plant of it had been found under the reign of *Nero*, and that it was sent to this Prince as a great curiosity.

Modern Botanists pretend that the *lazerpitium* is the same plant with the *silphium* of our gardens. But they are evidently in an error, from the descriptions which the Ancients, and among others, *Pliny* and *Dioscorides* have left us of it. For my own part, I have no doubt that the *lazerpitium* is of the number of the vegetables which are destined to flit along the Earth, from East to West, and from West to East.

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It is perhaps at present on the western shores of Africa, whither the easterly winds may have conveyed it's seeds; perhaps, likewise, by the revolutions of the westerly winds, it may have returned to the place where it was in the days of *Augustus*; or it may have been conveyed into the plains of Ethiopia, among Nations totally unacquainted with it's pretended wonderful qualities.

Pliny enumerates a great many other vegetables, which are at this day to us equally unknown. It may merit observation, that those vegetable apparitions have been contemporary with several species of flitting birds, which have likewise disappeared. It is well known that there are several classes of birds, and of fishes, which do nothing but migrate incessantly over the Earth and through the Seas; some, in a certain revolution of days; others, at the end of a certain period of years. Many plants may be subjected to a similar destiny. This Law extends even to the Heavens, in which some new star is from time to time making it's appearance. Nature, as I think, has disposed her Works in such a manner as to have always some novelty in reserve, in order to keep Man continually in exercise. She has established, in the duration of the existence of the different beings of each kingdom, concerts of a moment, of an hour, of a day, of a moon, of a year, of the life of a man, of the duration of a cedar, and perhaps of that of a globe: but this undoubtedly is known to the SUPREME BEING alone.

I am persuaded at the same time, that the greatest part of flitting plants must have a principal centre,
such

such as a steep rock, or an island in the midst of the Sea, from whence they diffuse themselves over all the rest of the world. This leads me to deduce, what I consider as an irrefragable argument in support of the recent Creation of our Globe; it is this, were the Globe of very remote antiquity, all the possible combinations of the propagation of plants by seed, would have been already completed all over the World. Thus, for example, there would not be an uninhabited island and shore of the Seas of India, which you would not find planted with cocoa-trees, and sown with cocoa-nuts, which the Ocean wafts thither every year, and which it scatters alternately on their strands, by means of the variety of it's monsoons and of it's currents. Now it is unquestionably certain, that the radiations of that tree and it's fruit, the principal focuses of which are in the Maldivia Islands, are not hitherto diffused over all the islands of the Indian Ocean.

The Philosopher *Francis Leguat*, and his unfortunate companions, who were, in the year 1690, the first inhabitants of the small Island of Rodriguez, which lies a hundred leagues to the eastward of the Isle of France, found no cocoa-trees in it. But precisely at the period of their short residence there, the Sea threw upon the coast several cocoa-nuts in a state of germination; as if it had been the intention of Providence to induce them, by this useful and seasonable present, to remain on that island, and to cultivate it.

Francis Leguat, who was unacquainted with the relation which seeds have to the element in which they

they are designed to grow, was very much astonished to find that those fruits, which weighed from five to six pounds, must have performed a voyage of sixty or fourscore leagues, without being corrupted. He took it for granted, and he was in the right, that they came from the Island of St. Brande, which is situated to the North-east of Rodriguez. Those two desert islands had not as yet, from the Creation of the World, communicated to each other all their vegetables, though situated in a current of the Ocean which sets in alternately, in the course of one year, for six months toward the one, and six months toward the other.

However this may be, they planted those coconuts, which in the space of a year and a half sent out shoots of four feet in height. A blessing from Heaven so distinctly marked, had not the power of detaining them in that happy island. An inconsiderate desire of procuring for themselves women constrained them to abandon it, notwithstanding the remonstrances of *Leguat*, and plunged them into a long series of calamities which few of them were able to survive. For my own part, I can entertain no doubt that had they reposed the confidence in Providence which they had reason to do, it's care would have conveyed wives for them into that desert Island, as it had sent to them the gift of the cocoa-nut.

To return to the subject of vegetable navigation; all the combinations and the versatilities of their sowings, would have been long ago completed in islands lying between the same parallels, and in the same monsoons, if the World had been eternal. The double cocoa-nuts, the nurseries of which are in the
Sechelles

Sechelles Islands, would have diffused themselves, and would have had time to germinate on the Malabar coast, on which the Sea is from time to time throwing them. The Indians would have planted upon their shores those fruits to which they ascribed virtues so miraculous, while the palm-tree which bears them was so entirely unknown but twelve years ago to the people of this coast, that they believed them to be natives of the bottom of the Sea, and thence gave them the appellation of marine cocoa-nuts. There are in like manner a multitude of other fruits between the Tropics, of which the primordial stocks are in the Moluccas, in the Philippines, in the islands of the South-Sea, and which are entirely unknown on the coasts of both Continents, and even in the adjacent islands, which undoubtedly would have become there the objects of cultivation to their inhabitants, had the Sea been allowed sufficient time to multiply the projection of them on their shores.

I shall pursue this reflection no farther; but it evidently demonstrates the newness of the World. Were it eternal, and exempted from the care of a Providence, it's vegetables would long since have undergone all the possible combinations of the chance which re-sows them. We should find their different species in every situation where it was possible for them to grow. From this observation I deduce another consequence, namely this, That the Author of Nature evidently intended to link Mankind together by a reciprocal communication of benefits, the chain of which is as yet very far from being completed. Where is, for example, the benefactor of
Humanity,

Humanity, who shall transport to the Ostiaks and the Samoïèdes of Waigats Strait, Winter's tree from the Straits of Magellan, the bark of which unites the favour of cloves, of pepper, and of cinnamon? And who is the man that shall convey to Magellan's Strait the pease-tree of Siberia, to feed the starving Patagonian?

What a rich collection might Russia make, not only of the trees which thrive in the northern and the southern regions of America, but of those which, in all parts of the World, crown the lofty, ice-covered mountains, whose elevated ridges have a temperature approaching to that of her plains? Wherefore beholds she not her forests enriched with the pines of Virginia, and with the cedars of Mount Lebanon? The desert shores of the Irtis might every year clothe themselves with the same species of oats wherewith so many Nations, inhabiting the banks of the rivers of Canada, are principally supported. Not only might she collect in her plains the trees and the plants of cold Latitudes, but a great number of annual vegetables, which grow during the course of a Summer in warm and temperate Latitudes. I know by experience that the Summer's heat is as powerful at Petersburg as under the Line.

There are besides parts of the ground in the North, which have configurations perfectly adapted to afford a shelter against the northerly winds, and to multiply the warmth of the Sun. If the South has it's icy mountains, the North has it's reverbatory valleys. I have seen one of those small valleys near Petersburg, at the bottom of which flows a brook that never

freezes even in the midst of Winter. The rocks of granite, wherewith Finland is roughened all over, and which according to the report of Travellers cover most of the lands of Sweden, of the shores of the Frozen Ocean, and all Spitzbergen, are sufficient for producing the same temperatures, in many places, and for diminishing in them, to a considerable degree, the severity of the cold.

I have seen in Finland, near Wiburg, beyond the sixty-first degree of Latitude, cherry-trees entirely exposed to the weather, though these trees are natives of the forty-second degree; that is of the kingdom of Pontus, from whence *Lucullus* transplanted them to Rome after the defeat of *Mithridates*. The peasantry of that Province cultivate tobacco with success, which is a much more southerly plant, being originally a native of Brasil. It is I admit an annual plant, and that it does not acquire, in its northern situation, a very high degree of perfume; for they are under the necessity of exposing it to the heat of their stoves, in order to bring it to a state of perfect maturity. But the rocks with which Finland is covered over, would undoubtedly present, to attentive eyes, reverberating situations which might bring it to a sufficient degree of maturity, without the aid of artificial heat.

I myself found, not far from the city of Fredericksham, upon a dunghill, under the shelter of a rock, a very lofty tuft of oats the produce of a single seed, consisting of thirty-seven stalks, loaded with as many ears completely ripe, without reckoning a multitude of other small sucklers. I gathered it, with an intention

tion of having it presented to her Imperial Majesty, *Catharine II.* by my General *M. Dubosquet*, under whose orders, and in whose company I was then visiting the fortified places of that province: it was likewise his intention; but our Russian attendants, careless as all slaves are, suffered it to be lost. He was exceedingly vexed at this, as well as I. It is impossible to help thinking, that a sheaf of corn so rich and beautiful, the produce of a province considered even at Petersburg as smitten with sterility, because of the rocks which cover it's surface, and which procured for it from ancient Geographers the epithet of *lapidosa* (stony), would have been as acceptable to her Majesty, as the huge block of granite which she has since had conveyed from thence, to be formed at Petersburg into the basis of a statue of *Peter the Great*.

I have seen, in Poland, several private individuals cultivate the vine and the apricot-tree with very great success. *Mr. de la Roche*, Consul from the Prince of Moldavia, carried me, when at Warsaw, to a little garden in the suburbs of that City, which produced to the occupier an annual revenue of one hundred pistoles, though it did not contain quite thirty of the last-mentioned tree. It was totally unknown in that country a hundred and fifty years ago. The apricot was first introduced into it by a Frenchman, valet-de-chambre to a Queen of Poland. This man raised the fruit secretly, and made presents of it to the Grandees of the Country, pretending that he had received it from France by the couriers of the Court. The great did not fail to pay him magnificently for his presents;

and this species of commerce became to him the foundation of an ample fortune, by means of which his great-grand-children are at this day the most opulent Bankers of that Country.

What I have said respecting the possibility of enriching Russia and Poland with useful vegetables, is not only in the view of acknowledging, the best way in my power, the gracious reception with which I was honoured by persons of rank, and by the Government of those Countries, when I was a stranger among them; but because these indications tend equally to the improvement of France, the Climate of which is more temperate. We have icy mountains, capable of producing all the vegetables of the North; and reverberating valleys equally adapted to the production of most of those of the South. It would not be proper, as our custom is, to make an effort to render this species of culture general through a whole district, but to set it a-going in some little sheltered exposure, or in some small winding valley. The influence of these positions is of no great extent. Thus, the famous Constantia vine of the Cape of Good-Hope succeeds perfectly only on a small spot of ground, situated at the bottom of a little hill, whereas the adjoining and surrounding vineyards do not produce the muscadine grape of any thing like the same quality. Of this too I have personal experience.

In France, it would be proper to look for sheltered aspects, such as we have been describing, in places where there are white stones in abundance, the colour of which is the best adapted to reverberate the
rays

rays of the Sun. Nay I believe that marl is indebted to it's white colour, for part of the heat which it communicates to the lands on which it is spread ; for it reflects upon them the rays of the Sun with so much activity, as to burn up the first shoots of many herbs. This is the reason, if I am not mistaken, why marl, which has in other respects the principles of fecundation within itself, kills a great many of the smaller herbs which are accustomed to grow under the shade of the corn, and whose first leaves are more tender than those of corn, which is in general the most hardy of gramineous plants.

It would be farther necessary to look for those fortunate exposures in the vicinity of the Sea, and under the influence of it's winds, which are so necessary to the vegetation of many plants that several of them refuse to grow in the inland parts of a country. Such is, among others, the olive-tree, which it has been found impossible to propagate in the interior of Asia and of America, though the Latitude be in other respects favourable. Nay I have remarked that it is not fruitful in islands, and on shores, where it is excluded from the sea-breezes. To this cause I ascribe the sterility of those which have been planted in the Isle of France, on it's western shore; for it is sheltered from the East-winds by a chain of mountains. As to the cocoa-tree, it will not thrive between the Tropics, unless it has, if I may venture to say so, it's root in the sea-water. It is I firmly believe for want of those geographical considerations, and some others of a similar nature, that many plans of improvement in cultivation have failed in France, and in her Colonies.

However that may be, it might be possible to find within the kingdom an icy mountain, with perhaps a reverberating valley below. It would be a most agreeable employment to go in search of such a situation, and the greatest benefits might be derived from it. We might convert it into a Royal Garden, which should present to our Sovereign a spectacle of the vegetation of a multitude of climates, upon one line of less than fifteen hundred fathoms of elevation. There he might bid defiance to the burning heat of the dog-star, under the shade of cedars, on the mossy bank of a rivulet issuing from the snow; and perhaps escape the severity of Winter's cold, at the bottom of a valley with a southern aspect, under the palm-tree, and amidst a field of sugar-canes. We might there naturalize the animals which are the compatriots of those vegetables. He might hear the braying of the rein-deer of Lapland, from the same valley in which he would see the peacocks of Java building their nests. This landscape would collect around him a part of the tributes of the Creation, and exhibit to him an image of the terrestrial paradise, which was situated as I suppose in a similar position. In serious truth, I cannot help expressing a wish, that our Kings would extend their sublime enjoyments, as far as the study of Nature has pursued it's researches under their flourishing Empire.*

* *Nescia mens hominum fati fortisque futuræ!* Ah, blind to futurity! Little did good *Saint-Pierre* think that the ill-fated Prince, for whom he took so much delight to plant and decorate this earthly Paradise, was in the course of a few fleeting years to be dethroned, imprisoned, condemned, and publicly executed, in
the

It now remains, that I examine the harmonies which plants form with each other. These harmonies constitute the inexpressible charm lavished on the sites which Nature has sowed and planted with her own hand; and they are to be the subject of the ensuing section.

VEGETABLE HARMONIES OF PLANTS.

We are going to apply to plants the general principles laid down in the preceding Study, by examining one after another the harmonies of their colours, and of their forms.

The verdure of plants, which is so grateful to the eye, is a harmony of two colours opposite in their elementary generation, of yellow, which is the colour of the Earth, and of blue, which is the colour of the Heavens. Had Nature dyed plants yellow, they would have been confounded with the ground; if blue, they would have been confounded with the Heavens and the Waters. In the first case, all would have appeared earth; in the second, all would have appeared sea: but their verdure gives them contrasts the most delightful with the grounds of this magnificent picture, and consonances equally agreeable with the yellow colour of the Earth, and with the azure of the Heavens.

The green colour possesses this farther advantage, that it accords in a most wonderful manner with all the Metropolis of his own Kingdom; and the very name of King proscribed by a Nation once enthusiastically attached to Royalty. How wonderful are the Works of Nature! How mysterious the Ways of Providence!—H. H.

the others, which arises from it's being the harmony of the two extreme colours. Painters who are endowed with taste, hang the walls of their exhibition-rooms with green, in order that the pictures, of whatever colours, may detach themselves from that ground without harshness, and harmonize upon it without confusion.*

Nature, not satisfied with this first general tint, has employed, in extending it over the ground of her scene, what Painters call *transitions*. She has appropriated a particular shade of bluish green, which we call sea-green, to plants which grow in the vicinity of water, and of the Heavens. This is the shade which in general tinges the plants of the shores, as reeds, willows, poplars; and those of high grounds, as the thistle, the cypress, and the pine; and which makes the azure of the rivers to harmonize with the verdure of the meadows, and the azure of the Heavens with the verdure of the heights. Thus, by means of this light and fugitive tint, Nature diffuses delicious harmonies over the limits of the waters, and along the profiles of landscapes; and it is productive of a still farther magic to the eye, in that it gives greater apparent depth to the valleys, and more elevation to the mountains.

* Undoubtedly when they put on a green ground pictures of plants, or landscapes, such pictures detach themselves from it but indifferently. There is, in my opinion, a tint better adapted to be the ground of a picture-gallery; namely, gray. This tint, formed of black and white, which are the extremes of the chain of colours, harmonizes with every other without exception. Nature frequently employs it in the Heavens, and on the Horizon, by means of vapours and of clouds, which are generally of that colour.

Something

Something more wonderful still challenges our attention, namely this, that though she employs but one single colour in arraying so many plants, she extracts out of it a quantity of tints so endlessly varied, that each of those plants has it's own, peculiar to itself, and which detaches it sufficiently from it's neighbour to be distinguishable from it ; and each of these tints is farther varying from day to day, from the commencement of Spring, when most of them exhibit themselves in a bloody verdure, up to the last days of Autumn, when they are transformed into various yellows.

Nature, after having thus harmonized the ground of her picture, by means of a general colour, has detached from it every vegetable in particular, by means of contrasts. Such as are designed to grow immediately on the ground, on strands, or on dusky rocks, are entirely green, both leaves and stems, as the greatest part of reeds, of grasses, of mosses, of tapers, and of aloes ; but those which are destined to arise out of the midst of herbage, have stems of different tints of brown ; such are the trunks of most trees, and the stalks of shrubs. The alder, for example, which thrives amidst the grassy turf, has a stem of an ashy-coloured gray ; but the wallwort, which entirely resembles it in all other respects, and which grows immediately on the ground, is green all over. The mugwort, which grows along hedges, has reddish stems, by which it is easily distinguishable from the neighbouring shrubs. Nay there are in every genus of plants, certain species which, by their shining colours, seem to have been formed for terminating the limits

limits of their classes. Such is, in the forb genus, a species called the Canadian service tree, the branches of which are of a coral red. There are in the willow tribe, osiers whose scions are as yellow as gold; but there is not a single plant which does not detach itself entirely from the ground which surrounds it by its flowers and by its fruits.

It is impossible to suppose that so many varieties should be mechanical results of the colour next to which bodies are placed; for example, that the bluish-green of most mountain-vegetables should be an effect of the azure of the Heavens. It is worthy of being remarked, that the blue colour is not to be found, at least as far as I know, in the flowers or in the fruits of lofty trees; for in this case they would be confounded with the Heavens; but it is very common on the ground in the flowers of herbs, such as the blue-bottle, the scabious, the violet, the liverwort, the iris, and many others. On the contrary, the colour of the earth is very common in the fruits of lofty trees, such as the chestnut, the walnut, the cocoa-nut, and the cone of the pine. Hence we have an intimation that the point of view of this magnificent picture was taken from the eye of Man.

Nature, after having distinguished the harmonic colour of each vegetable, by the contrasting colour of its flowers, and of its fruits, has followed the same laws in the forms which she has given them. The most beautiful of forms, as we have seen, is the spherical; and the most agreeable contrast which it is capable of presenting, is when found in opposition to the radiating form. You will frequently find this
form

form and it's contrast in the aggregation of the flowers that go by the name of radiated, as the daisy, which has a circle of small white divergent petals surrounding it's yellow disk : we find it, likewise, with other combinations, in the blue-bottle, in the asters, and in a multitude of other species. When the radiating parts of the flower are outermost, the spherical are inmost, as in the species which I have just named ; but when the first are inmost, the spherical parts are outermost ; this may be remarked in those whose stamina are drawn out into length, and the petals in spherical portions, such as the flowers of the hawthorn and of the apple-tree, and most part of the rosaceous and liliaceous plants. Sometimes the contrast of the flower is with the surrounding parts of the plant. The rose is one of those in which it is most strongly marked : it's disk is formed of beautiful spherical portions, it's calix is bristled with beards, and it's stalk beset with thorns.

When the spherical form is found placed in a flower between the radiating and the parabolic, then there is a complete elementary generation, the effect of which is always highly agreeable ; it is this too which is produced by most of the flowers that have just been named, by the profile of their calices, which terminate their projecting stems. The nosegay girls are so sensible of the value of this combination, that they sell a simple rose on it's branch at a much higher price than they would ask for a large posy of the same flowers, especially if there are on it a few buds, which present the charming progressions of the florification. But Nature is so vast, and my incapacity so great,
that

that I must restrict myself to throwing a simple glance on the contrast which arises from the simple opposition of forms : it is so universal that Nature has given it to plants which had it not in themselves, by opposing them to others which have a configuration entirely different.

The species opposite in forms are almost always in company. When you fall in with an old willow on the bank of a river which art has not degraded, you may frequently see upon it a great convolvulus covering the radiated foliage of the tree with it's own heart-formed leaves, and it's bell-shaped white flowers, to make up the defect of apparent flowers, which Nature has denied to this tree. Different species of ropeweed produce the same harmonies on various species of tall graminaceous plants.

These plants, called creeping, are scattered over the whole vegetable kingdom, and are appropriated as I suppose to each vertical species. They have a great variety of methods of fixing themselves on the upright plant, which would alone merit a particular treatise. There are some which turn themselves spirally around the trunks of forest trees, such as the honey-suckle ; others, as pease, have hands with three to five fingers, by which they lay hold of shrubbery : it is very remarkable that those hands do not make their appearance till they have acquired a height at which they begin to have occasion for them as a support ; others, as the bastard-pomegranate, attach themselves in form of a cork-screw ; others form a simple hook with the tail of their leaf, as the nasturtium : the pink employs a similar method of adhesion.

tion. These two beautiful flowers are supported in our gardens with rods ; but it would be a problem well worthy of the investigation of Florists, to ascertain what are the auxiliary plants, if I may call them so, to which these were designed to unite themselves, in the places where they are native ; delightful groups might be formed by their re-union.

I am persuaded that there is not a vegetable but what has it's opposite in some part of the Earth : their mutual harmony is the cause of the secret pleasure which we feel in wild rural scenes, where Nature is at liberty to combine them. The fir-tree rises in the forest of the North like a lofty pyramid, of a dark green, and with a motionless attitude. The birch is almost always found in it's vicinity, and grows to nearly the same height, is of the form of an inverted pyramid, of a lively verdure, with a moveable foliage, continually playing about with every breath of the wind. The round-leaved trefoil loves to grow in the midst of the fine grass, and to adorn it with it's own flowery nosegay. Nay I believe that Nature has made those deep incisions in the leaves of a great many vegetables, entirely in the view of facilitating alliances of this sort, and of opening a passage for the grasses, the verdure and delicacy of whose stems form with them an infinity of contrasts. Of this instances innumerable may be seen in uncultivated fields, where tufts of grass pierce through the broad plants of the thistle and the echium. This arrangement has likewise been made, in order that the grasses, which are the most useful of all vegetables, might receive a portion of the rain from Heaven, through the inter-

stices

fices of the broad foliage of those privileged children of Nature, which would stifle every thing around them, were it not for those profound incisions. Nature does nothing merely for the pleasure of doing it, but always connects with it some reason of utility : this appears to me so much the more decidedly marked, that the incisions in leaves are much more common, and deeper, in the plants and under-shrubbery which rise to no great height, than in trees.

The harmonies resulting from contrast are to be found even in the waters. The reed, on the brink of rivers, raises into the air it's radiating leaves, and it's embrowned distaff, whereas the nymphæa extends at it's feet a broad heart-formed foliage, and roses of yellow gold : the one presents on the waters, a continued pallisade, and the other a platform of verdure.

Similar oppositions present themselves in the most frightful of climates. *Martens*, of Hamburg, who has given a very good account of Spitzbergen, tells us, that when the seamen belonging to the vessel in which he navigated along it's coasts, heaved up the anchor, they seldom failed to bring up with it a very broad leaf of the *alga marina*, six feet in length, and attached to a tail as long : this leaf was smooth, of a brown colour spotted with black, striped with two white stripes, and made in form of a tongue : he calls it the plant of the rock. But what is very singular, it was usually accompanied by a hairy plant, about six feet in length, like a horse's tail, and formed of hairs so fine, that one might denominate it, says he, the silk of the rock. He found on those dismal shores, where the empire of *Flora* is in such a state of desolation,

lation, the *cochlearia* (scurvy-grass) and the sorrel, which grew together. The leaf of the first is rounded in form of a spoon, that of the other is lengthened into the shape of the iron head of an arrow. A Physician of considerable ability, of the name of *Bartholin*,* has observed, that the virtues of their salts are as opposite as their configurations; those of the first are alkalis, those of the other are acids; and from their union results what medical men call a neutral salt, which they ought rather to call a harmonic salt, the most powerful remedy which can be employed as an antiscorbutic, and the scurvy is a disease which is readily, and usually, caught in those dreadful climates.

For my own part, I apprehend that the qualities of plants are harmonic as their forms; and that as often as we find them grouped agreeably and constantly, there must result from the union of their qualities, for nourishment, for health, or for pleasure, a harmony as agreeable as that which arises from the contrast of their figures. This is a presumption that I could support, by referring to the instinct of animals, which in browsing on the herbage, vary the choice of their aliments; but this consideration would lead me away from my subject.

I should never come to a conclusion, were I to go into a detail respecting the harmonies of so many plants which we undervalue, because they are feeble or common. If we suppose them, for thought's sake, of the size of our trees, the majesty of the palm would disappear before the magnificence of their attitudes and of their proportions. Some of them, such

* See *Chomel's History of Common Plants*.

as the echium, rise like superb chandeliers, forming a vacuum round their centre, and rearing toward Heaven their prickly arms, loaded their whole length through, with lamps of violet-coloured flowers. The verbascum, on the contrary, extends around it broad leaves of solemn drapery, and sends up from it's centre a long distaff of yellow flowers, as salutary to the stomach as grateful to the touch. The violet, of deep blue, contrasts, in the Spring, with the primrose, expanding it's golden cup with a scarlet brim. On the embrowned angles of the rock, under the shade of ancient beech-trees, the mushroom, white and round as an ivory piece for the chess-board, arises out of a bed of moss of the most beautiful green.

Mushrooms alone present a multitude of unknown consonances and contrasts. This class is, first, the most varied of all those of the vegetables of our climates. *Sebastian le Vaillant* enumerates one hundred and four species of them in the vicinity of Paris, without taking into the account the fungoids, which furnish at least a dozen more. Nature has dispersed them over most shady places, where they frequently form contrasts the most extraordinary. There are some which thrive only on the naked rock, where they present a forest of small filaments, each of which supports it's particular chapter. There are some which grow on substances the most abject, with forms the most solemn; such is that which thrives on what falls from the horse, and which resembles a Roman hat; whence it has borrowed it's name. Others present agreeable consonances: such is that which grows at the foot of the alder, under the form of a cockle.

What

What nymph has planted a shell by the root of a tree of the rivers ?

This numerous tribe appears to have it's destiny attached to that of the trees, which have each a mushroom appropriated to itself, and rarely to be found elsewhere : such are those which grow only on the roots of plumb-trees and pines. To no purpose does Heaven pour down it's copious rains ; the mushroom, under covert of it's umbrella, receives not a single drop. They derive the whole support of life from the Earth, and from the potent vegetable to whose fortune they have united their own : like those little Sayoyards who are planted as posts at the gates of the hotels of the Great, they extract their subsistence out of the superfluity of another ; they grow under the shade of the Powers of the forest, and live on the superabundance of their sumptuous banquets.

Other vegetables present oppositions of strength to weakness in a different way, and consonances of protection still more distinguished. Those which we have been mentioning, like lordly Chieftains, leave their humble friends at their feet : the others carry them in their arms, and place them upon their heads. They frequently receive the recompence of their noble hospitality. The liannes which in the Antilles-Islands attach themselves to the trees of the forest, defend them from the fury of the hurricane. The Gallic Oak has oftener than once seen itself an object of veneration to the Nations, from having carried the mistletoe in it's branches. The ivy, a friend to monuments and tombs ; the ivy, with which in ancient times they crowned the Poets who conferred immortality,

sometimes covers with it's foliage the trunks of the stateliest trees. It is one among many, of the irresistible proofs of the vegetable compensations of Nature; for I do not recollect that I ever saw the ivy on the trunks of pines, of firs, or of other trees whose foliage lasts all the year round. It invests those only which are stripped by the hand of Winter. Symbol of a generous friendship, it attaches itself only to the wretched; and when death itself has smitten it's protector, it restores to him again the honours of the forest where he lives no longer; it makes him revive, by decorating his shade with garlands of flowers, and festoons of undecaying verdure.

The greatest part of plants which grow under the shade are adorned with the most vivid colours; thus the mosses display the brilliancy of their emerald green on the dusky sides of the rocks. In the forests, the mushroom and the agaricum distinguish themselves by their colours from the roots of the trees under which they grow. The ivy detaches itself from their gray barks by it's shining green; the mistletoe discloses it's branches of a yellowish green, and it's fruits similar to pearls, amidst the thick foliage of the oak. The aquatic convolvulus dazzles you with it's large white bell-shaped flowers on the trunk of the willow. The virgin's-bower clothes with verdure the ancient towers, and in Autumn, her foliage of gold and purple seems to fix, on their sober eminences, the rich colours of the setting Sun. Other plants, entirely concealed from the eye, discover themselves by their perfumes. It is thus that the obscure violet invites the hand of lovers to the bosom of the prickly shrub.

shrub. And thus is verified on every hand, that great Law of contrasts which governs the World : No aggregation is in plants the effect of chance.

Nature has established in the numerous tribes of the vegetable kingdom, a multitude of alliances, the end of which is unknown to us. There are plants, for example, the sexes of which are on different individuals, as in the animal Creation. There are others whom you always find united in several clusters, as if they loved to live in society ; others, on the contrary, you almost always meet with in a state of solitude. I presume that many of these relations are connected with the character of the birds which live on their fruits, and which re-sow them. The herbage in the meadows frequently represents the bearing of the trees in the forests ; there are some which in their foliage and proportions resemble the pine, the fir, and the oak : nay I believe that every tree has a consonance in it's corresponding herb. It is by a magic of this sort that small spots of ground present to us the extent of a large district. If you are under a grove of oaks, and perceive on an adjoining hillock tufts of germander, the foliage of which resembles them in miniature, and you feel all the effect of a perspective. These diminutions of proportion extend from trees even down to mosses, and are the causes, in part, of the pleasure which we enjoy in wild rural scenes, where Nature has had leisure to dispose and accomplish her plans. The effect of those vegetable illusions is so undoubtedly certain, that if you have the ground cleared, the extent of any particular spot, when stripped

ped of it's natural vegetables, appears much smaller than before.

Nature farther employs diminishing shades of verdure, which, being lighter on the summit of trees than at their base, gives them the appearance of being more lofty than they really are. She appropriates, besides, the pyramidical form to many mountain-trees, in order to increase the apparent elevation of their site ; this is observable in the larch, the fir, the cypress, and in many other plants which grow on heights. She sometimes unites, in the same place, the effects of seasons and of climates the most opposite. She clothes, in hot climates, the whole sides of mountains with the vegetable called the ice-plant, because it seems entirely covered over with flakes of ice ; you would believe that, in the midst of Summer, *Boreas* had breathed upon it all the chilling blasts of the North.

On the other hand we find, in Russia, mosses in the midst of Winter ; which, from the red and smoky colour of their flowers, have the appearance of being set on fire. In our rainy climates, she crowns the summits of hillocks with broom and rosemary ; and the tops of ancient towers with the yellow gilly-flower : in the midst of the gloomiest day you would imagine you saw the rays of the Sun shining upon them.

In another place, she produces the effect of the wind in the midst of perfect stillness. In many parts of America, a bird has only to alight on a tuft of the sensitive plant, in order to put in motion the whole
stripe,

stripe, which sometimes extends to three furlongs. The European traveller stands still, and observes with astonishment the air tranquil, but the herbage in motion. I myself have sometimes mistaken, in our own woods, the murmur of poplars and of aspens for the bubbling of brooks. Oftener than once seated under their shade on the skirt of a meadow, whose herbage the winds put into an undulatory motion, this multiplied tremulousness has transfused into my blood the imaginary coolness of the stream.

Nature frequently employs the ærial vapours in order to give a greater extent to our landscapes. She diffuses them over the cavities of valleys, and stops them at the windings of rivers, giving you a glimpse, at intervals, of their long canals illuminated by the Sun. She thus multiplies their plans, and prolongs their extent. She sometimes withdraws this magic veil from the bottom of the valleys; and rolling it over the adjacent mountains, on which she tinges it with vermilion and azure, she confounds the circumference of the Earth with the vault of Heaven. It is thus that she employs clouds as evanescent as the illusions of human life, to raise us to Heaven; it is thus that she expands over her most profound mysteries, the ineffable sensations of infinity, and that she withdraws from our senses the perception of her Works, in order to convey to our minds a more impressive feeling of them.

ANIMAL HARMONIES OF PLANTS.

Nature, after having established on a soil formed of fragments insensible and lifeless, vegetables endowed

with principles of life, of growth, and of generation, accommodated to those beings which had, together with these same faculties, the power of self-motion, dispositions to inhabit them, passions to derive their nourishment from them, and an instinct which impels them to make a proper choice : these are animals. I shall here speak only of the most common relations which they have with plants ; but were I to attempt a detail of those which their innumerable tribes have with the elements, with each other, and with Man, whatever might be my ignorance, I should disclose a multitude of scenes still more worthy of admiration.

In an order entirely new, Nature has not changed her Laws : she has established the same harmonies and the same contrasts, of animals to plants, as of plants to the elements. It would appear natural to our feeble reason, and consonant to the great principles of our Sciences, which ascribe so much power to analogies, and to physical causes, that so many sensible beings which are produced in the midst of verdure, should be in process of time affected by it. The impressions of their parents, added to those of their own infancy, which serve to explain so many appearances in the human species, acquiring in them increasing strength, from generation to generation, by new tints, ought at length to exhibit oxen and sheep as green as the grass on which they pasture. We have observed in the preceding Study, that as vegetables were detached from the ground by means of their green colour, the animals which live on verdure distinguish themselves from it, in their turn, by means of their dusky colours ; and those which live on the
dusky

dusky barks of trees, or on other dark grounds, are invested with colours brilliant, and sometimes green.

On this subject I have to remark, that many species of the birds of India which live amidst the foliage of trees, as the greatest part of paroquets, many of the colibri, and even of turtles, are of the finest green ; but independently of the white, blue, and red marbled spots, which distinguish their different tribes, and render them perceptible at a distance upon the trees, the brilliant verdure of their plumage detaches them, to great advantage, from the solemn and imbrowned verdure of those southern forests. We have seen that Nature employs this as the general means of diminishing the reflexes of the heat ; but that she might not confound the objects of her picture, if she has darkened the ground of her scene, she has bestowed greater brilliancy on the dresses of the actors.

It would appear that Nature has appropriated the species of animals coloured in the most agreeable manner, to the species of vegetables whose flowers are the least vivid, as a compensation. There are much fewer brilliant flowers between the Tropics than in the Temperate Zones ; and as a compensation, the insects, the birds, and even the quadrupeds, such as several species of monkeys and lizards, are there arrayed in the most lively colours. When they rest on their proper vegetable, they form with them the most beautiful contrasts, and the most lovely harmonies. I have often stood still, in the West-Indies, to contemplate the little lizards, which live on the branches of trees, employ themselves in catching flies. They are of a beautiful apple-green, and have on their back

a sort of characters of the most vivid red, resembling the letters of the Arabian alphabet. When a cocoa-tree had several of them dispersed along it's stem, never was there Egyptian Pyramid of porphyry with it's hieroglyphies, so mysterious and so magnificent, in my eyes.*

I have likewise seen flocks of small birds, denominated *cardinals*, because they are red all over, settle on shrubbery, the verdure of which was blackened by the Sun, and present the appearance of girandoles fludded with little burning lamps. Father *du Tertre* says, that there is not, in the Antilles, a spectacle more brilliant, than the alighting of coveys of the parrot species, called *arras*, on the summit of a palm-tree. The blue, the red, and the yellow of their plumage, covers the boughs of the flowerless tree with the most superb enamel. Harmonies somewhat similar may be seen in our own climates. The gold-finch, with his red head, and wings tipped with yellow, appears at a distance on a bush, like the flower of the thistle in which he was hatched. You would sometimes take the slate-coloured wagtail, when perched on the extremity of the leaves of a reed, for the flower of the iris.

It would be a very great curiosity to collect a great number of these oppositions, and of those analogies. They would lead us to a discovery of the plant which is peculiarly adapted to each animal. Natura-

* They have sometimes served me to explain the moral sense of hieroglyphics, engraven on the obelisks of Egypt in honour of her conquering heroes. On beholding the characters traced upon them from right to left, with heads, beaks and paws, they brought to my recollection the little fly-catchers of my palm-tree.

lists have paid to those adaptations no great degree of attention; such of them as have written the History of Birds, class them according to the feet, the bill, the nostrils. They sometimes speak of the seasons of their appearance, but scarcely ever of the trees which they frequent. Those only who, employed in making collections of butterflies, are frequently under the necessity of looking for them in their state of nymph, or caterpillar, have sometimes distinguished those insects by the names of the vegetables on which they found them. Such are the caterpillars of the tithymale, of the pine, of the elm, and so on, which they discovered to be peculiarly appropriated to these vegetables. But there is not an animal existing but what may be referred to it's own particular corresponding plant.

We have divided plants into aërial, aquatic, and terrestrial, as animals themselves are divisible, and we have found in the two extreme classes unvarying harmonies with their elements. They may be farther divided into two classes, into trees and herbs, as animals likewise are into volatile and quadrupeds. Nature does not associate the two kingdoms in consonances, but in contrasts; that is, she does not attach the great animals to the great vegetables; but unites them contrariwise, by associating the class of trees with that of the small animals, and that of herbs with the great quadrupeds: and by means of these oppositions, she bestows adaptations of protection to the feeble, and of accommodation to the powerful.

This Law is so general, that I have remarked in every country, where there is no great variety in the species

species of grasses, those of the quadrupeds which live upon them are but few in number ; and that wherever the species of trees are multiplied, those of volatiles are likewise so. The truth of this may be ascertained by consulting the herbals of many parts of America, and among others those of Guyana and of Brasil, which present but few varieties in the grasses, but a great number in the trees. It is well known that those countries have in fact few quadrupeds natural to them, and that they are peopled, on the contrary, with an infinite variety of birds and insects.

If we cast a glance on the relations of grasses to quadrupeds, we shall find that, notwithstanding their apparent contrasts, there is actually between them a multitude of real correspondencies. The moderate elevation of the gramineous plants places them within reach of the jaws of quadrupeds, whose head is in a horizontal position, and frequently inclined toward the ground. Their delicate shoots seem formed to be laid hold of by broad and fleshy lips ; their tender stems, to be easily snapped by the incisive teeth ; their mealy seeds easily bruised by the grinders. Besides, their bushy tufts, and elastic without being ligneous, present soft litter to ponderous bodies.

If, on the contrary, we examine the correspondencies which exist between trees and birds, we shall find that the branches of trees may be easily clasped by the four-toed feet of most birds, which Nature has disposed in such a manner, that by means of three before and one behind, they may be able to grasp the bough as with a hand. Again, the birds find in the different tiers of the foliage, a shelter against the rain,
the

the Sun, and the cold, toward which the thickness of the trunks farther contribute. The apertures formed in these, and the mosses which grow upon them, furnish situations for building their nests, and materials for lining them. The round or oblong seeds of trees are accommodated to the form of their bills. Such as bear fleshy fruits are resorted to by birds, which have beaks pointed, or crooked, like a pick-axe.

In the islands of the regions situated between the Tropics, and along the banks of the great rivers of America, the greatest part of maritime and fluviatic trees, among others, many species of the palm-tree, bear fruits enclosed in very hard shells, whereby they are enabled to float on the face of the waters, which re-sow them at a great distance; but their covering does not secure them from the attack of the birds. The different tribes of paroquets which have made them their habitation, and of which I have reason to believe that there is a species appropriated to each species of palm-tree, easily find means to open their hard cases with hooked bills, which pierce like an awl, and hold fast like pincers.

Nature has farther accommodated animals of a third order, which find in the bark, or in the flower of a plant, as many conveniencies as the quadruped has in a meadow, or the bird in the whole tree: I mean the insects. Certain Naturalists have divided them into six great tribes, which they have characterized, according to custom, but to very little purpose, by Greek names. They class them into *coléopterous*, or cased, insects; as the scarab tribe, such are
our

our may-bugs, or chafers : into *hémipterous*, or half-cased, as the gallinsects, such is the kermés : into *tétrapterous farinaceous*, or four-mealy-winged, as butterflies : into *tétrapterous*, without any addition, or four-naked-winged, as bees : into *dipterous*, or two-winged, as the common fly : and into *apterous*, or wingless, as the ant. But these six classes admit of a multitude of divisions and of subdivisions, which unite species of insects of forms and instincts the most dissimilar ; and separate a great many others of them which have otherwise a very striking analogy among themselves.

Whatever may be in this, the order of animals in question appears to be particularly appropriated to trees. *Pliny* observes that ants are singularly fond of the grains of the cypress. He tells us, that they attack the cones which contain them, on their half-opening as they arrive at maturity, and plunder them to their very last seed ; and he considers it as a miracle of Nature, that an insect so diminutive should destroy the seed of one of the largest trees in the World. I believe we never shall be able to establish, in the different tribes of insects, a real order, and in the study of them, that pleasure and utility of which it is susceptible, except by referring them to the different parts of vegetables. Thus we might refer to the nectars of the flowers, the butterflies and flies which are furnished with a proboscis for sipping up their juices ; to their stamina, those flies which, like the bee, have spoon-mouths scooped out in their thighs, lined with hair, for collecting their powder, and four wings to assist them in carrying off their
booty ;

booty ; to the leaves of plants, the common flies and the gallinsects, which have pointed and hollow prongs for making incisions in them, and for drinking up their fluids ; to the grains, the scarab race, as the weevil, which is designed to force it's way into the heart of the seed to feed upon it's meal, and which is provided with wings inclosed in cases, to prevent their being injured, and with a file to open for itself a passage ; to the stem, those worms which are quite naked, because they have no need of being clothed in a substance of wood to shelter them on every side, but they are furnished with augers, by the help of which they sometimes go nigh to destroy whole forests : finally, to the wreck of every sort, the ants which come armed with pincers, and with an instinct of advancing in hosts to cut to pieces, and to carry off, every thing that suits their purpose.

The desert of this vast vegetable banquet is hurled down by the rainy torrents to the rivers, and thence to the Sea, where it presents a new order of relation with the fishes. It is worthy of remark, that the most attractive baits which can be presented to them, are deduced from the vegetable kingdom, and particularly from the grains, or from the substances of plants having the aquatic characters which we have indicated, such as the hard shell of the Levant, the rush of Smyrna, the juice of the tithymal, the Celtic spike-nard, the cummin, the anise, the nettle, the sweet-marjoram, the root of the birthwort, and the seed of the hemp. Thus, the relations of these plants with fishes confirm what has been said of those of their grains with the waters.

By referring the different tribes of insects to the different parts of plants, and in that way only, can we discern the reasons for which Nature has been determined to bestow on those diminutive animals figures so extraordinary. We should then comprehend the uses of their utensils, of which the greater part is hitherto unknown; and we should have continually new occasion to admire the Divine Intelligence, and to perfect our own. On the other hand, such progress in knowledge would diffuse the clearest light over many parts of plants, the utility of which is a world unknown to Botanists, because they have consonances only with animals.

I am persuaded that there is not a single vegetable but what has connected with it at least one individual of each of the six general classes of insects, acknowledged by Naturalists. As Nature has divided each genus of plants into different species, in order to render them capable of growing in different situations; she has, in like manner, divided each genus of insects into different species, in order to adapt them to inhabit different species of plants. For this reason she has painted, and numbered, in a thousand different but invariable ways, the almost infinite divisions of the same branch. For example, we constantly find on the elm the beautiful butterfly, called the gold-brocade, on account of its rich colouring. That which goes by the name of the four omicrons, and which lives I know not where, always produces descendants impressed with that Greek character four times, on their wings. There is a species of bee with five claws, which lives on radiated flowers only; without

out those claws, she could not cling fast to the plane mirrors of those flowers, and load herself from their stamina, so easily as the common bee, which usually labours at the bottom of those with a deep corolla.

Not that I imagine any one plant nourishes, in it's different varieties, all the collateral branches of one family of insects. I believe that each genus of these extends much farther than the genus of plants which serves as it's principal basis. In this, Nature manifests another of her Laws, by virtue of which she has rendered that the best which is the most common. As the animal is of a nature superior to the vegetable, the species of the first are more multiplied and more generally diffused than those of the second. For example, there are not so many as sixteen hundred species of plants in the vicinity of Paris; but within the same compass there are enumerated near six thousand species of flies. This leads me to presume therefore that the different tribes of plants cross with those of animals, which renders their species susceptible of different harmonies. Of this a judgment may be formed from the variety of tastes in birds of the same family. The black-headed yellow-hammer nestles in the ivy; the red-headed in walls, in the neighbourhood of hemp-fields; the brown yellow-hammer builds on trees by the highway's-side, where she finishes off her nest with horse-hair. A dozen species of that bird are enumerated in our climates, each of which has it's particular department. Our different sorts of larks are likewise apportioned to different situations; to the woods, to the meadows, to the heaths, to arable lands, and to the shores of the Sea.

Very

Very interesting observations may be made respecting the duration of vegetables, which are unequal, though subjugated to the influences of the same elements. The oak serves as a monument to the nations ; and the *noftocium*, which grows at his foot, lives only a single day. All I shall say upon this head in general is, that the period of their decay is by no means regulated in conformity to that of their growth ; neither is that of their fecundity proportioned to their weakness, to climates, or to seasons, as some have pretended. *Pliny** quotes instances of holmes, of plane-trees, and of cypresses, which existed in his time, and which were more ancient than Rome, that is more than seven hundred-years old. He farther tells us, that there were still to be seen near Troy, around the tomb of Ilus, oaks which had been there from the time that Troy took the name of Ilium, which carries us back to an antiquity much more remote.

I have seen, in Lower Normandy, in a village church-yard, an aged yew planted in the time of *William* the Conqueror ; it is still crowned with verdure, though it's trunk cavernous, and through and through pervious to the day, resembles the staves of an old cask. Nay there are bushes which seem to have immortality conferred upon them. We find, in many parts of the kingdom, hawthorns which the devotion of the Commonalty has consecrated by images of the Virgin, and which have lasted for several ages, as may be ascertained by the inscriptions upon the chapels reared in the vicinity.

* Natural History, book xvi. chap. 44.

But, in general, Nature has proportioned the duration and the fecundity of plants to the demands of animal life. A great many plants expire as soon as they have yielded their seed, which they commit to the winds. There are some, such as mushrooms, whose existence is limited to a few days, as the species of flies which feed upon them. Others retain their seeds all the Winter through, for the use of the birds; such are the fruits of most shrubs.

The fecundity of plants is by no means regulated according to their size; but proportionally to the fecundity of the animal species which is to feed upon them. The pannic, and the small millet, and some other gramineous plants, so useful to man and beast, produce incomparably more grains than many plants both greater and smaller than themselves. There are many herbs which perpetuate themselves by their seeds only once a year; but the chickweed renovates itself by its seeds up to seven or eight times, without being interrupted in the process even by Winter. It produces ripe seeds within six weeks from the time of its being sown. The capsule which contains them then inverts itself, turning toward the earth, and half opens, to leave them at liberty to be carried away by the winds and the rains, which sow them again every where. This plant insures, the whole year through, the subsistence of the small birds of our climates. Thus Providence is so much the more powerful as the creature is more feeble.

Other plants have relations to animals the more tenderly affecting, in proportion as climates and seasons seem to exercise over the animal the greater de-

gree of severity. Were we enabled to investigate these adaptations to the bottom, they would explain all the varieties of vegetation, in every latitude, and in every season. Wherefore, for example, do most of the trees of the North shed their leaves in Winter; and wherefore do those of the South retain theirs all the year round? Wherefore, in defiance of the Winter's cold in the North, do the firs there continue always clothed with verdure? It is a matter of no small difficulty to discover the cause of this; but the end is obviously discernible. If the birch and the larch of the North drop their foliage, on the approach of Winter, it is to furnish litter to the beasts of the forest; and if the pyramidical fir there retains it's leaves, it is to afford them shelter amidst the snows. This tree presents to the birds the mosses which are suspended on it's branches, and it's cones replenished with ripe kernels. In their vicinity, oftentimes, thickets of the service-tree display for their use the shining clusters of their scarlet berries.

In the Winters of our climates, many evergreen shrubs, as the ivy, the privet, and others, which remain loaded with black or red fruit, contrasting strikingly with the snow, as the prinsepint, the thorn, and the cglantine, present to the winged creation both a habitation and food. In the countries of the Torrid Zone, the earth is clothed with fresh liannces, and shaded with trees of a broad foliage, under which animals find a cool retreat. The trees themselves of those climates seem afraid of exposing their fruits to the burning heat of the Sun: instead of rearing them as a cone, or exhibiting them on the circum-

circumference of their heads, they frequently conceal them under a thick foliage, and bear them attached to their trunks, or at the sprouting of their branches: such are the *jacquier*, the banana, the palm-tree of every species, the *papayer*, and a multitude of others. If their fruits invite not the animals externally, by vivid colours, they call them by the noise which they excite. The lumpy cocoa-nut, as it falls from the height of the tree which bears it, makes the earth resound to a considerable distance. The black pods of the *cannescier* when ripe, and agitated by the wind, produce, as they clash against each other, a sound resembling the tic-tac of a mill. When the grayish fruit of the *genipa* of the Antilles comes to maturity, and falls from the tree, it bounces on the ground with a noise like the report of a pistol.* Upon this signal, more than one guest no doubt resorts thither in quest of a repast. This fruit seems particularly destined to the use of the land-crabs, which are eagerly fond of it, and very soon grow fat on this kind of food. It would have answered no purpose for them to see it on the tree, which they are incapable of climbing; but they are informed of the moment when it is proper for food, by the noise of its fall.

Other fruits, as the *jaque* and *mango*, affect the sense of smelling in animals so powerfully, as to be perceptible more than the quarter of a league distant, when the fruit is to windward. I believe that this property of emitting a powerful perfume, is likewise common to such of our fruits as lie concealed under the foliage, *apricots* for instance. There

* *Father du Tertre's History of the Antilles.*

are other vegetables which manifest themselves to animals, if I may use that expression, only in the night-time. The jalap of Peru, or the belle of the night, opens not her strongly-scented flowers except in the dark. The flower of the nasturtium, or nun, which is a native of the same country, emits in the dark a phosphoric light, observed for the first time in Europe by a daughter of the celebrated *Linnaeus*.

The properties of these plants convey a happy idea of those delightful climates, in which the nights are sufficiently calm, and sufficiently luminous to disclose a new order of society among animals. Nay there are insects which stand in no need of any pharos to assist them in steering their nocturnal courses. They carry their lanterns about them; such are the species of luminous flies. They scatter themselves, sometimes, in the groves of orange-trees, of papayas, and of other fruit-trees, in the midst of the darkest nights. They dart, at once, by several reiterated beatings of their wings, a dozen of fiery streams, which illuminate the foliage and fruits of the trees, whereon they settle with a golden and bluish light;* then, all at once repressing their motion, they plunge again into obscurity. They alternately resume and intermit this sport during the whole night. Sometimes there are detached from them swarms of brilliant sparks of light, which rise into the air like the emanations of a firework.

Were we to study the relations which plants have to animals, we should perceive in them the use of many of the parts, which are frequently considered as

* Consult the same Work of *du Tertre*.

productions of the caprice and of the confusion of Nature. So widely extended are those relations, that it may be confidently affirmed, that there is not a down upon a plant, not an intertexture of a shrub, not a cavity, not a colour of leaf, not a prickle, but what has it's utility. Those wonderful harmonies are especially to be remarked with relation to the lodgings and the nests of animals. If, in hot countries, there are plants loaded with down, it is because there are moths entirely naked, which clip off their fleece, and weave it into clothing. There is found, on the banks of the Amazon, a species of reed from twenty-five to thirty-feet high, the summit of which is terminated by a large ball of earth. This ball is the workmanship of the ants, which retire thither at the time of the rains, and of the periodical inundations of that river: they go up, and descend along the cavity of this reed, and live on the refuse which is then swimming around them on the surface of the water.

It is, I presume, for the purpose of furnishing similar retreats to many small insects, that Nature has hollowed the stems of most of our plants of the shore. The valisneria,* which grows in the stream

* Consult, with regard to the Valisneria, the Voyage of an anonymous English traveller performed in the year 1750, to France, Italy, and the Islands of the Archipelago, in four small volumes, vol. i. It is stored with judicious observations of every kind. Consult likewise, respecting the genipa, and the different fruits, plants, and animals of southern countries, the sprightly Father *du Tertre*, the patriotic Father *Charlevoix*, *John de Laet*, the Historian, and all travellers who have written on the subject of Nature, without the spirit of system, assisted by the light of reason alone.

of the Rhone, and carries it's flower on a spiral stem, capable of being drawn out in proportion to the rapidity of the sudden swellings of that river, has holes pierced through at the basis of it's leaves, the use of which is much more extraordinary. If you take up this plant by the root, and put it into a large vessel full of water, you perceive at the basis of it's leaves masses of bluish jelly, which insensibly lengthen into pyramids of a beautiful red. These pyramids presently furrow themselves into flutings, which disengage from the summit, invert themselves all around, and present, by their expansion, very beautiful flowers formed of rays purple, yellow, and blue. By little and little, each of these flowers advances out of the cavity in which it is partly contained, and withdraws to some distance from the plant, remaining however attached to it by a small filament. You then perceive each of the rays of which those flowers are composed assume a motion peculiar to itself, which communicates a circular movement to the water, and precipitates to the centre of each of them all the small bodies which are floating around. If those wonderful expansions are disturbed by any sudden shock, immediately every filament contracts, all the rays close, and all the pyramids retire into their cavities; for those pretended flowers are polypuses.

There are in certain plants parts which may be considered as characters of uncultivated Nature, but which are, like all the rest of her Works, evident proofs of the wisdom and providence, of her AUTHOR; such are the prickles. Their forms are varied without
end,

end, especially in hot countries. Some are shaped like saws, like hooks, like needles, like the head of a halberd, and like caltrops. Some of them are round like awls, some triangular, like the shoemaker's piercer, and some flattened like a lancet. There is no less variety in their aggregations. Some are arranged on the leaves in balls, like those of the opuntia; others in stripes, like those of the Peruvian taper. Some are invisible, as those of the shrub of the Antilles, known by the name of captain's-wood. The leaves of this formidable plant appear on the upper side smooth and shining; but they are covered on the under side with very delicate prickles, which are inserted in such a manner, that apply your hand to them ever so cautiously, it is impossible to avoid pricking your fingers.

There are other thorns planted only on the stems of plants, others are on their branches. In our climates they are scarcely ever to be found, except on shrubbery, and on a few trees; but in both Indies, they are scattered over a great many species of trees. Their very various forms and dispositions have relations, of which the greatest part are to us unknown, to the security and defence of the birds which live upon them. It was necessary that many of the trees of those countries should be armed with thorns, because many quadrupeds are there to be found capable of climbing them, to eat the eggs and the young of birds, such as the monkey, the civet-cat, the tiger, the wild-eat, the musk-rat, the opossum, the wild rat, and even the common rat.

The Asiatic acacia * presents to it's winged inhabitants a retreat absolutely inaccessible to their enemies. It bears no prickles on it's trunk, and in it's branches; but at the height of ten or twelve feet, precisely at the place where the tree begins to branch off, there is a belt of several rows of large thorns, from ten to twelve inches in length, presenting an impenetrable rampart of spikes nearly resembling the iron head of a halberd. The collar of the tree is encircled by it in such a manner, that it is impossible for any quadruped to get up. The acacia of America, improperly called the false-acacia, has it's prickles formed into hooks, and scattered over it's branches, undoubtedly from some unknown relation of opposition to the species of quadruped which makes war on the bird that inhabits it.

There are, in the Antilles Islands, trees which have no thorny prickles, but which are much more ingeniously protected than if they had. A plant known in those countries by the name of the prickly thistle, which is a species of creeping taper, attaches it's roots, similar to filaments, to the trunk of one of those trees,

* There is a plant of the Asiatic acacia to be seen in the beautiful garden adjacent to the iron gate of Chaillot, which formerly belonged to the virtuous Chevalier de *Genfin*. As to the name of *false-acacia*, given to the acacia of America, I must observe that Nature produces nothing false. She has given varieties of all her productions, in all Countries, in order to bestow upon them relations adapted to the elements and to animals; and when we do not find in these the characters which we have assigned to them, the charge of falshood is not in justice to be fixed on her Works, but on our systems.

and

and runs to the ground all around it, to a considerable distance, crossing it's branches one over another, and forming an inclosure of them which no quadruped dares to approach. It likewise produces a fruit very grateful to the palate. On beholding a tree, the foliage of which is harmless, filled with birds that have there fixed their habitation, surrounded about the roots by one of those prickly thistles, you are presented with the idea of one of those commercial defenceless cities, apparently accessible on every side, but protected all around by a citadel, encompassing it with extended entrenchments. Thus the tree is on one side, and it's thorn on the other.

Quadrupeds which live on the eggs of birds would be reduced to great distress, did not Nature sometimes produce, on the summits of those very trees, a vegetable of very extraordinary form which opens a passage to them. It is in every respect the opposite of the prickly thistle. It consists of a root of two feet in length, as thick as a man's leg, pricked, as if pierced with a bodkin, and adhering to a branch of the tree by a multitude of filaments, somewhat in the same way that the prickly thistle is affixed to the under part of it's trunk. Like the other, it derives it's nourishment from the tree, and emits from ten to twelve great leaves in form of a heart, of about three feet in length and two in breadth, resembling the leaves of the *nympheæ*. Father *du Tertre* calls it the false-root of China. What is still more extraordinary, it lets fall from the top of the tree on which it is placed, in a perpendicular direction, very strong cordage of the size of a quill, the whole length through, which

which takes root on reaching the ground. The plant itself emits no smell, but this cordage favours strongly of garlic. Undoubtedly, when a monkey, or some such clambering animal, perceives this broad standard of verdure, to no purpose does the tree oppose around it's root a fortification of thorns, this signal announces that he has a friend within the fortrefs: the smell of the cordage, which descends down to the ground, directs him to the scaling ladder, even during the night; and while the birds are sleeping in security on their nests, confident in the strength of their bulwark, the enemy gets possession of the town through the suburbs.

In those countries, the thorns upon the trees afford protection even to the insects. Bees there carry on their honey-making processes in the aged trunks of prickly trees hollowed by the hand of Time. It is very remarkable that Nature, who has provided this resource for the bees of America, has withheld from them a sting, as if those on the trees were sufficient for their defence. I believe that to this reason it may be ascribed, though no attention has been paid to it, that we have never hitherto been able to rear in the Antilles Islands the honey-bees of the country. They refused no doubt to take up their abode in domestic hives, because they did not consider themselves as there in a state of security; but might perhaps have been induced to make that choice, had the hives to which they were invited been decorated and defended by thorns.

If Nature employs prickly vegetables for the defence even of flies against the attacks of quadrupeds, she

she sometimes makes use of the same means for delivering quadrupeds from the persecution of common flies. She has in truth bestowed on those which are the most exposed to it, manes and tails, armed with long hair, to drive them away; but the multiplication of those insects is so rapid in warm and humid seasons and countries, as to threaten destruction to the whole race of animals. One of the vegetable barriers opposed to them by Nature is the *dionœa muscipula*. This plant bears on one and the same branch opposite little leaves, besmeared with a sugary liquor resembling manna, and studded with very sharp prickles. When a fly perches on one of those little leaves, they instantly close with a spring, like the jaws of a wolf-trap, and the fly is spitted through and through.

There is another species of the *dionœa* which catches those insects with it's flower. When a fly attempts to extract it's nectareous juices, the corolla, which is tubulous, shuts at the collar, seizes the insect by the proboscis, and thus puts it to death. This plant is cultivated in the Royal Garden. It is observable, that it's cup-formed flower is white, radiated with red, and that these two colours universally attract flies, from their natural avidity of milk and of blood.

There are aquatic plants armed with thorns proper for catching fishes. You may see in the Royal Garden an American plant called *martinia*, the flower of which has a very agreeable odour, and which, from the form of it's rounded leaves, the sleekness of their tails and of their stems, has all the aquatic characters

which

which have been indicated. It has this farther character peculiar to itself, that it transpires so copiously as to appear to the touch in a state of continual humidity. I can have no doubt therefore that this plant grows in America on the brink of the water. But the shell which envelops it's seed possesses a very extraordinary nautical character. It resembles a fish half dried, white and black, with a long fin upon the back. The tail of this fish is drawn out into great length, and terminates in a very sharp point, bent into the form of a fish-hook. This tail usually separates into two, and thus presents a double hook. The configuration of this vegetable fish is completely similar in size, and in form, to the hook which is employed at sea for catching goldneys, and at the head of which is figured, in linen, a flying-fish, with this exception, that the goldney-hook has but one curve and barb, whereas the shell of the martinia has two, which must render it's effect more infallible. This shell contains several black seeds, shrivelled, and similar to the globules of the sheep's dung flattened.

As I possess but few books on Botany, I did not know of what country the martinia was a native ; but having lately consulted the Work of *Linnaeus*, I find that we got it from Vera-Cruz. The celebrated Naturalist whom I have just mentioned, discovers in this shell no resemblance but that of a woodcock's head ; but had he ever seen the hook for goldneys, he could not possibly have hesitated about preferring this similitude in the appearance, in as much as the extremity of this pretended beak bends back into two hooks, which prick like needles, and are, as well as the whole shell,

shell, and the tail by which it is united to the stem, of a ligneous and horny substance not easily broken asunder. *John de Laet* * tells us, that the land of Vera-Cruz is on a level with the Sea, and that its port, called *St. John de Hulloo*, is formed by a small island no higher than the water; so that, says he, when the tide rises very high, the land wholly disappears.

Such inundations are very common at the bottom of the Gulf of Mexico, as we learn from the relation which *Dampier* has given us of the Bay of Campeachy, which is in that vicinity. Hence I presume, that the martinia, which grows on the inundated shores of Vera-Cruz, has certain relations, which we know nothing of, to the fishes of the Sea; in as much as the seeds of several trees and plants of those countries, described by *John de Laet*, possess very curious nautical forms. A drawing of the martinia, taken from Nature, is presented fronting page 152 of this Volume.

But there is no occasion to resort to foreign plants for ascertaining the existence of vegetable relations to animal. The bramble, which affords in every field through which we pass a shelter to so many birds, has its prickles formed into hooks; so that it not only prevents the cattle from disturbing the birds' retirement, but frequently lays them under contribution for a flake of wool or hair proper for finishing off their nests, as a reprisal for hostility committed, and an indemnification for damages sustained. *Pliny* alleges that this gave rise to the pretended animosity

* History of the West-Indies, book v. chap. 18.

between the linnet and the ass. This quadruped, whose palate is proof against prickles, frequently browses on the shrub in which the linnet builds her nest. She is so terrified at his voice, that on hearing it, says he, she kicks down her eggs; and her callow brood die with the terror of it. But she makes war upon him in her turn, by fixing her attack on the scratches made in his hide by the prickles, and by picking the flesh in those tender parts to the very bone. It must be a very amusing spectacle to view the combat between the little melodious songster, and the dull, braying, but otherwise inoffensive, animal.

Did we know the animal relations of plants, we should possess sources of intelligence respecting the instincts of the brute creation with which we are totally unacquainted. We should know the origin of their friendships and of their animosities, at least as to those which are formed in society; for with regard to such as are innate, I do not believe that the cause of them was ever revealed to any man. These are of a different order, and belong to another world. How should so many animals have entered into life under the dominion of hatred, without having been offended; furnished with skill and industry, without having served an apprenticeship; and directed by an instinct more infallible than experience? How came the electrical power to be conferred on the torpedo, invisibility on the camelion, and the light of the stars themselves on a fly? Who taught the aquatic-bug to slide along the waters, and another species of the same denomination to swim upon the back; both the one and the other for catching their prey, which hovers

hovers along the surface? The water-spider is still more ingenious. She incloses a bubble of air in a contexture of filaments, takes her station in the middle, and plunges to the bottom of the brook, where the air-bubble appears like a globule of quick-silver. There she expatiates under the shade of the nymphæa, exempted from the dread of every foe. If, in this species, two individuals different in sex happen to meet, and to suit each other, the two globules, being in a state of approximation, become united into one, and the two insects are in the same atmosphere. The Romans who constructed on the shores of Baiæ saloons underneath the waves of the Sea, in order to enjoy the coolness and the murmuring noise of the waters, during the heats of Summer, were less dexterous, and less voluptuous. If a man united in himself those marvellous faculties which are the portion of insects, he would pass for a god with his fellow-creatures.

It is of importance for us to be acquainted with at least such insects as destroy those which are offensive to Man. We might turn their mutual hostility to good account, by converting it into the means of our own repose. The spider catches the flies in nets; the formicaleo surprises the ants in a tunnel of sand; the four-winged ichneumon seizes the butterfly on the wing. There is another ichneumon, so small and so cunning, that it lays an egg in the anus of the vine-fetter. Man has it in his power to multiply at pleasure the families of insects which are useful to him; and may find means of diminishing such as make depredations on his agricultural possessions. The small
birds

birds of our groves tender him, to the same effect, services of still greater extent, and accompanied with other circumstances inexpressibly agreeable. They are all directed by instinct to live in his vicinity, and about the pastures and habitations of his flocks and herds. A single species of them might frequently be sufficient to protect the cattle from the insects which infest them through the Summer.

There is in the North a gadfly, called *Kourbma* by the Laplanders, and by the Learned, *æstrus rangiferinus*, which torments the domestic rein-deer to such a degree as to force them in agony to the mountains, and sometimes actually plagues them to death, by depositing its eggs in the skin of the animal. Many dissertations have, as the custom is, been composed on this subject, but no remedy for the evil has been proposed. I am convinced there must be birds in Lapland, which would deliver the rein-deer from this formidable insect, did not the Laplanders terrify them away by the noise of their fowling-pieces. These arms of civilized Nations have overspread with barbarism all our plains. The birds, destined to embellish the habitation of Man, withdraw from it, or approach with timidity and mistrust. The sound of musquetry ought to be prohibited at least around the haunts of the harmless cattle. When the birds are not scared away by the fowler they follow their instincts.

I have frequently seen in the Isle of France a species of starling, called martin, imported thither from India, perch familiarly on the back and horns of the oxen to pick them clean. To this bird that island stands indebted at the present day for the destruction of the locusts,

locusts, which in former times committed such ravages upon it. In those of our European rural scenes which still exhibit, on the part of Man, some degree of hospitality toward the innocent warblers, he has the pleasure of seeing the stork build her nest on the ridge of his house, the swallow flutter about in his apartments, and the wagtail, along the bank of the river, frisk around his sheep to protect them from the gnats.

The foundation of all this variety of pleasant and useful knowledge is laid in the study of plants. Each of them is the focus of the life of animals, the species of which there collect in a point as the rays of a circle at their centre.

As soon as the Sun, arrived in his annual progression at the sign of the Ram, has given the signal of Spring to our Hemisphere, the rainy and warm wind of the South takes its departure from Africa, swells the Seas, elevates the rivers above their banks, so that they inundate the adjacent plains, and fatten them with their fertilizing slime; and levels, in the forests, the aged trees, the decayed trunks, and every thing that presents an obstacle to future vegetation. It melts the snows which cover our fields, and forcing its way to the very Pole, it breaks to pieces and dissolves the enormous masses of ice which Winter had there accumulated. When this revolution, known all over the Globe by the name of the equinoctial gale, has taken place in the month of March, the Sun revolves night and day around our Pole, so, that there is not a single point in the whole northern Hemisphere that can escape his heat.

Every step he advances in his course through the Heavens, a new plant makes it's appearance on the Earth. Each of them arises in succession, and occupies it's proper station at the hour assigned to it; at one and the same instant it receives the light in it's flowers, and the dew of Heaven on it's foliage. In proportion to it's progress in growth, the different insect-tribes which thence derive their nourishment likewise display their existence, and unfold their characters. At this epocha too each species of bird resorts to the species of plant with which she is acquainted, there to build her nest, and to feed her young with the animal prey which it presents to her, to supply the want of the seeds which it has not as yet produced. We presently behold the tribes of birds of passage flock thither in quest of the portion which Nature has provided for them likewise. First comes the swallow to preserve our habitations from the vermin, by planting her nest around us. The quail forsakes Africa, and grazing the billows of the Mediterranean in troops innumerable, is scattered over the boundless meadows of the Ukraine. The heathcock pursues his course northward as far as Lapland. The wild ducks and geese, the silvery swans, forming long triangular squadrons in the air, advance to the very islands adjacent to the Pole. The stork, in former times adored in Egypt, which she abandons, crosses over Europe, halting here and there to take repose, even in great cities, on the roofs of the houses of hospitable Germany. All these birds feed their young on the insects and reptiles which the newly expanded plants have fostered into life.

Then

Then too it is that the fishes issue in legions from the northern abyſſes of the Ocean, allured to the mouths of rivers by clouds of insects, which are confined entirely to their waters, or expand into life along their banks. They stem the watery current in shoals, and advance, skipping and springing, up to the very sources of the stream; others, as the north-capers, suffer themselves to be swept into the general current of the Atlantic Ocean, and appear in form of a ship's bottom on the coasts of Brasil, and on those of Guinea.

Quadrupeds themselves likewise then undertake long peregrinations. Some proceed from the South to the North, with the Sun; others from East to West. There are some which coast along the rugged chains of mountains; others follow the courses of rivers which have never been navigated. Lengthened columns of black cattle pasture in America, along the banks of the Méchassipi, which they cause to resound with their bellowing. Numerous squadrons of horses traverse the rivers and the deserts of Tartary; and wild sheep stray bleating amidst its vast solitudes. These flocks have neither overseer nor shepherd to guide them through the desert, to the music of the pipe; but the expansion of herbage which they know, determines the moment of their departure, and the limits of their progress. It is then that each animal inhabits his natural situation, and reposes under the shade of the vegetable of his fathers. It is then that the chains of harmony exert all their force, and that all, being animated by consonances, or by contrasts, the air, the waters, the

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forests,

forests, and the rocks, seem to be vocal, to be impassioned, to be transported with delight.

But this vast concert can be comprehended by celestial Intelligences only. To Man it is sufficient, in order to study Nature with advantage, that he limit his researches to the study of one single vegetable. It would be necessary for this purpose to make choice of an aged tree, in some solitary situation. From the characters which have been indicated, a judgment might easily be formed whether it be in it's natural position; but still better from it's beauty, and from the accessories which Nature uniformly places in connection with it, where the hand of Man has not interposed to derange the operations. The student would first observe it's elementary relations, and the striking characters which distinguish the different species of the same genus, some of which grow at the sources of rivers, and others at the place of their discharge into the Ocean. He would afterwards examine it's convolvuluses, it's mosses, it's mistletoes, it's scolopendræ, the mushrooms of it's roots, nay, the very grasses which grow under it's shade. He would perceive, in each of it's vegetables, new elementary relations, adapted to the places which they occupy, and to the tree which sustains or shelters them.

His attention might next be directed to the various species of animals which resort to it as a habitation, and he would presently be convinced, that from the snail up to the squirrel, there is not a single one but what has determinate and characteristic relations to the dependencies of it's vegetation.

If the tree in question were growing in a forest,
itself.

itself too of considerable antiquity, it would most probably have in it's vicinity, the tree which Nature designed should contrast with it in the same site, as for example the birch with the fir. It is farther probable that the accessory vegetables and animals of this last, would in like manner form a contrast with those of the first. These two spheres of observation would mutually illuminate each other, and would diffuse the clearest light over the manners of the animals which frequent them. We should then have a complete chapter of that immense and sublime History of Nature, the alphabet of which is hitherto unknown to us.

I am fully convinced that without fatigue, and almost without any trouble, discoveries the most curious might be made. Were we to restrict our enquiries but to one single compartment, we should discover a multitude of the most enchanting harmonies. In order to enjoy some imperfect sketches of this kind we must have recourse to travellers. Our Ornithologists, fettered by methods and system, only think of swelling their catalogue, and distinguish nothing in birds save the feet and the bill. It is not in the nests that they observe them, but in hunting, and in their pouch. They even consider the colours of their plumage as accidents. It was not by chance however that Nature, on the shores of Brasil, bestowed a beautiful carnation colour, with a border of black, on the extremity of the wings of the *Ouara*, a species of curlew inhabiting the sea-green foliage of the *pale-tuvier*, which grows in the bosom of the waves, and bears no apparent flowers. The *savia*, another bird

of the same climate, is yellow over the belly, with the rest of the plumage gray. It is about the size of a sparrow, and perches on the pepper-plant, the flowers of which have no lustre, but whose grains are eaten by this bird, and re-soyn wherever she takes her flight.

To those correspondences must be added such as pertain to site, which itself derives so much beauty from the overshadowing vegetable. These harmonies are detailed by Father *Francis d'Abbeville*. If credit is to be given to the History of Voyages by the Abbé *Prevost*, there is on the banks of the Senegal a fluviatic tree, the leaves of which are thorny, and the branches pendent, in form of an arch. It serves as a habitation to birds called kurbalos, or fishers, of the size of a sparrow, variously coloured. Their bill is very long, and armed with little teeth resembling a saw. They build a nest of the bulk of a pear, composed of earth, feathers, straw, moss, and attach it to a long thread, suspended from the extremity of the branches which project over the river, in order to secure it from the serpents and monkeys, which sometimes contrive to clamber up after them. You would take those nests, at a little distance, for the fruit of the tree: and some of those trees contain to the number of a thousand. You perceive the kurbalos fluttering incessantly along the water, and entering into their nests with a motion that dazzles the eyes.

According to Father *Charlevoix*, there grows in Virginia, on the brink of the lakes, a laurel-leaved yew-tree which pushes several stems from its root,
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the branches of which embrace all the surrounding trees, and climb to the height of more than sixteen feet. They form in Summer an impenetrable shade, and in Winter a temperate retreat from the birds. It's flowers have no very striking appearance, and it's fruit grows in round clusters, loaded with black grains. This yew has for it's principal inhabitant a very beautiful kind of jay. The head of that bird is adorned with a long black crest which it can erect at pleasure. It's back is of a deep purple. The wings are black on the inside, blue externally, and white at the extremities, with white stripes across every feather. It's tail is blue and marked with the same stripes as the wings; and it's cry is far from being disagreeable.

There are birds which lodge not upon their favourite plant, but opposite to it. Such is the colibri, which frequently nestles, in the Antilles Islands, on the straw which thatches a cottage, in order to live under the protection of Man. In our climates, the nightingale constructs his nest under covert of a bush, choosing in preference such situations as repeat an echo, and carefully observing to expose it to the morning sun. Having employed such precautions, he takes his station in the vicinity, against the trunk of a tree; and there, confounded with the colour of it's bark, and motionless, he becomes invisible. But he presently animates the obscure retreat which he has chosen by the divine melody of his song, and effaces all the brilliancy of plumage by the charms of his music.

But whatever enchantment may be diffused by plants and animals over the situations which have

been assigned to them by Nature, I never can consider a landscape as possessing all its beauty, unless I perceive in it at least one little hut. The habitation of Man confers on every species of vegetable a new degree of interest or of majesty. Nothing more is necessary in many cases than a tree, in order to characterize, in a country, the wants of a whole Nation, and the care of Providence. I love to see the family of an Arab under the date-tree of the desert, and the boat of an islander of the Maldivias loaded with cocoa-nuts, under the cocoa-trees of their gravelly strands. The hovel of a poor un-industrious Negro gives me pleasure, under the shade of a great gourd-plant, which exhibits his complete set of household furniture. Our magnificent hotels in great cities are the habitations of tradesmen merely : in the country, they are transformed into castles, palaces, temples. The long avenues which announce them confound themselves with those which form the communication of empires. This is not in truth what I consider as most interesting in rural scenery. To the most ostentatious exhibition of splendor I have frequently preferred the view of a little hamlet of fishermen, built by the side of a river. With inexpressible delight have I sometimes reposed under the shade of the willows, and of the poplars, on which were suspended the bow-nets composed of their own branches.

I shall now proceed, in my usual superficial manner, to take a rapid glance of the harmonies of plants with Man ; and that I may introduce at least something of order into a subject so rich in matter, I shall farther divide those harmonies, relatively to Man himself,

self, into *elementary*, into *vegetable*, into *animal*, and into *human* properly so called, or *alimentary*.

HUMAN HARMONIES OF PLANTS.

Elementary Harmonies of Plants relatively to Man.

If we consider the vegetable Order under the simple relations of strength and magnitude, we shall find it divided, with a sufficient degree of generality, into three great classes, namely, into herbs, into shrubs, and into trees. It is to be remarked, in the first place, that herbs are of a substance pliant and soft. Had they been ligneous and hard, like the young boughs of trees, to which it might appear they ought naturally to have a resemblance, as they grow on the same soil, the greatest part of the Earth would have been inaccessible to the foot of Man, till the fire or the hatchet had cleared the way for him. It was not by chance therefore that so many grasses, mosses, and herbs, assumed a soft and yielding texture, nor from want of nourishment, or of the means of expansion; for some of those herbs rise to a very great height, such as the banana of India, and several ferulaceous plants of our own climates, which attain the stature of a little tree.

On the other hand, there are ligneous shrubs which do not exceed the generality of herbs in height; but they grow for the most part on rugged and steep places, affording to Man the means of clambering up with facility, for they shoot out of the very clefts of the rocks. But as there are rocks which have no clefts, and which present the perpendicularity of a wall

wall, there are likewise creeping plants which take root at their bases, and which, fixing themselves to their sides, rise in close cohesion to a height surpassing that of many of the tallest trees : such are the ivy, the virgin-vine, and a great number of the *lianne* tribe, which mantle along the rocks of southern regions.

Were the Earth covered with vegetables of this sort, it would be impossible to walk over it. It is very remarkable that when uninhabited islands were discovered, some were found clothed with forests, as the Island of Madeira ; others in which there was nothing but herbage and rushes, as the Malouine Islands, at the entrance of Magellan's Strait ; others carpeted with mosses simply, such as several little isles on the coast of Spitzbergen ; others, in great number, on which these several vegetables were blended ; but I do not know of a single one which was found to contain only shrubbery and liannes. Nature has placed this class only on places not easily to be scaled, in order to facilitate access to Man. It may be affirmed, that no precipice presents a surface so perpendicular as to be insurmountable, with their assistance. Thus aided the ancient Gauls were on the point of storming the capitol.

As to trees, though they are replenished with a vegetative force which elevates them to a very considerable height, the greater part of them do not send out their first branches but at a certain distance from the ground. So that though they form, when they have attained a certain degree of elevation, an intertexture impenetrable to the Sun, which they extend
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to a great distance around, they leave however about their roots, avenues sufficient to render them accessible, so that the forests may be traversed with ease and expedition.

Such then are the general dispositions of vegetables upon the Earth, relatively to the occasion which Man had to range over it. The herbage serves as a carpet to his feet; the shrubbery as a scaling ladder to his hands; and the trees are as so many parasols over his head. Nature, after having established those proportions between them, has distributed them in all the varieties of situation, by bestowing on them, abstractedly from their particular relations to the elements, and to the animal creation, qualities the best adapted to minister to the necessities of Man, and to compensate in his favour the inconveniences of climate.

Though this manner of studying her Works be now held in contempt by most Naturalists, to it however shall our researches be limited. We have just been considering plants according to their shape and size, after the manner of gardeners; we proceed farther to examine them as is done by the wood-feller, the huntsman, the carpenter, the fisherman, the shepherd, the sailor, nay, the nosegay-maker. It is of small importance whether we be learned, provided we cease not to be men.

It is in the countries of the North, and on the summit of cold mountains, that the pine grows, and the fir, and the cedar, and most part of resinous trees, which shelter man from the snows by the closeness of their foliage, and which furnish him, during the Winter

ter season, with torches, and fuel for his fire-side. It is very remarkable that the leaves of those ever-green trees are filiform, and extremely adapted by this configuration, which possesses the farther advantage of reverberating the heat like the hair of animals, for resistance to the impetuosity of the winds that beat with peculiar violence on elevated situations. The Swedish Naturalists have observed that the fattest pines are to be found on the driest and most sandy regions of Norway. The larch, which takes equal pleasure in the cold mountains, has a very resinous trunk.

Mathiola, in his useful commentary on *Dioscorides*, informs us, that there is no substance more proper than the charcoal of those trees for promptly melting the iron minerals, in the vicinity of which they peculiarly thrive. They are besides loaded with mosses, some species of which catch fire from the slightest spark. He relates, that being obliged on a certain occasion to pass the night in the lofty mountains of the Strait of Trento, where he was botanizing, he found there a great quantity of larches (*larix*) bearded all over, to use his own expression, and completely whitened with moss. The shepherds of the place willing to amuse him, set fire to the mosses of some of those trees, which was immediately communicated with the rapidity of gunpowder touched with the match. Amidst the obscurity of the night, the flame and the sparks seemed to ascend up to the very Heavens. They diffused, as they burnt, a very agreeable perfume. He farther remarks, that the best agaricum grows upon the larch, and that the arque-busiers

builders of his time made use of it for keeping up fire, and for making matches. Thus Nature, in crowning the summit of cold and ferruginous mountains with those vast vegetable torches, has placed the match in their branches, the tinder at their foot, and the steel at their roots.

To the South, on the contrary, trees present in their foliage, fans, umbrellas, parasols. The latanier carries each of it's leaves plaited as a fan, attached to a long tail, and similar, when completely displayed, to a radiating Sun of verdure. Two of those trees are to be seen in the Royal Garden. The leaf of the banana resembles a long and broad girdle, which undoubtedly procured for it the name of Adam's fig-tree. The magnitude of the leaves of several species of trees increases in proportion as we approach the Line. That of the cocoa-tree with double fruit, of the Sechelles Islands, is from twelve to fifteen feet long, and from seven to eight broad. A single one is sufficient to cover a numerous family. One of those leaves is likewise to be seen in the Royal Cabinet of Natural History. That of the talipot of the Island of Ceylon is of nearly the same size.

The interesting and unfortunate *Robert Knox*, who has given the best account of Ceylon which I am acquainted with, tells us, that one of the leaves of the talipot is capable of covering from fifteen to twenty persons. When it is dry, continues he, it is at once strong and pliant, so that you may fold and unfold it at pleasure, being naturally plaited like a fan. In this state it is not bigger than a man's arm, and extremely light. The natives cut it into triangles, though

though it is naturally round, and each of them carries one of those sections over his head, holding the angular part before, in his hand, to open for himself a passage through the bushes. The soldiers employ this leaf as a covering to their tents. He considers it, and with good reason, as one of the greatest blessings of Providence, in a country burnt up by the Sun, and inundated by the rains, for six months of the year.

Nature has provided in those climates parasols for whole villages; for the fig-tree, denominated in India the fig-tree of the Banians, a drawing of which may be seen in *Tavernier*, and in several other travellers, grows on the very burning sand of the sea-shore, throwing from the extremity of its branches a multitude of shoots, which drop to the ground, there take root, and form around the principal trunk, a great number of covered arcades, whose shade is impervious to the rays of the Sun.

In our temperate climates we experience a similar benevolence on the part of Nature. In the warm and thirsty season, she bestows upon us a variety of fruits replenished with the most refreshing juices, such as cherries, peaches, melons; and as Winter approaches, those which warm and comfort by their oils, such as the almond and the walnut. Certain Naturalists have considered even the ligneous shells of these fruits as a preservative against the cold of the gloomy season; but these are, as we have seen, the means of floating and of navigating. Nature employs others, with which we are not acquainted, for preserving the substances of fruits from the impressions

pressions of the air. For example, she preserves through the whole Winter many species of apples and pears, which have no other covering than a pellicle so very thin that it is impossible to determine how fine it is.

Nature has placed other vegetables in humid and in dry situations, the qualities of which are inexplicable on the principles of our Physics, but which admirably harmonize with the necessities of the men who inhabit those places. Along the water-side grow the plants and the trees which are the driest, the lightest, and consequently the best adapted to the purpose of crossing the stream. Such are reeds, which are hollow, and rushes, which are filled with an inflammable marrow. It requires but a very moderate bundle of rushes to bear the weight of a very heavy man upon the water. On the banks of the lakes of the North are produced those enormous birch-trees, the bark of a single one of which is sufficient to form a large canoe. This bark is similar to leather in pliancy, and so incorruptible by humidity, that, in Russia, I have seen some of it extracted from under the earth which covered powder magazines, perfectly sound, though it had lain there from the time of *Peter* the Great.

If we may depend on the testimony of *Pliny* and of *Plutarch*, there were found at Rome, four hundred years after the death of *Numa*, the books which that great King had commanded to be deposited with his body in the tomb. The body was entirely consumed; but the books, which treated of Philosophy and Religion, were in such a state of preservation, that

that *Petilius*, the Pretor, undertook to read them by command of the Senate. On the report which he made respecting their contents, they were ordered to be burnt. They were written on the bark of the birch-tree. This bark consists of an accumulation of ten or twelve sheets, white and thin like paper, the place of which it supplied to the ancients.

Nature presents to Man different trajectiles on different shores. She has planted on the banks of the rivers of India the bamboo, an enormous reed which rises there sometimes to the height of sixty feet, and swells to the size of a man's thigh. The part comprehended between two of its joints is sufficient to bear a man up on the water. The Indian places himself upon it a-straddle, and so crosses a river, swimming along by the motion of his feet. The Dutch Navigator, *John Hugo de Linschoten*, an author of reputation, assures us that the crocodile never touches persons who are passing rivers in this manner, though he frequently attacks canoes, and even the boats of Europeans. *Linschoten* ascribes the abstinence of this voracious animal to an antipathy which he has to that species of reed.

Francis Pyrard, another traveller, who has observed Nature with a careful eye, informs us that there grows on the shores of the Maldivia Islands a tree called *candou*, the wood of which is so light that it serves as cork for the fishermen.* I think I was once possessed of a log of wood of that species. It was stripped of the bark, perfectly white, of the thickness of my arm, about six feet long, and so light that I

† See *Pyrard's Voyage to the Maldivia Islands*, page 38.
could

could easily lift it by my finger and thumb. In these same islands, and on the same strands, rises the cocoa-tree, which there attains a higher degree of beauty than any where else in the World. Thus the tree of all others most useful to mariners grows on the shores of the Seas most frequented by men of that description. All the world knows that the vessel is there constructed of it's timber, that it's leaves are formed into sails, that the trunk serves for a mast, that the hempen substance called *caira*, which surrounds it's fruit, is wrought into cordage, and when the whole is ready for sea, a cargo of cocoa-nuts is the lading. It is farther remarkable that the cocoa-nut, before it comes to perfect maturity, contains a liquor which is an excellent antiscorbutic.

Is it not then a miracle of Nature, that this fruit, replenished with such milk, should come to perfection on the barren strand, and within the washing of the briny Deep? Nay it is only on the brink of the Sea that the tree which bears it arrives at it's highest beauty; for few are to be seen in the interior of countries.

Nature has placed a palm-tree of the same family, but of a different species, on the summit of the mountains of the same climates: it is the palmist. The stem of this tree is sometimes above a hundred feet high, it is perfectly straight, and bears on it's summit all the foliage which it has, a bunch of palms, from the midst of which issues a long roll of plaited leaves resembling the staff of a lance. This roll contains, in a sort of coriaceous sheath, leaves ready to shoot, which are very good for eating before their

expansion. The trunk of the palmist is woody only at the circumference, and it is so hard as to resist the edge of the best tempered hatchet. It may be cleft, with the utmost ease, from end to end, and is filled inwardly with a spongy substance which may be easily separated. Thus prepared it serves to form, for conducting waters frequently diverted from their course by the rocks which are at the summit of mountains, tubes which are not corruptible by humidity. Thus the palm-tree gives to the inhabitants of those regions the means of constructing aqueducts at the source of rivers, and slips at the place of their discharge.

Other species of trees render them the same services in other situations. On the shores of the Antilles Islands grows the *acajou*, there called, but improperly, the cedar, on account of its incorruptibility. It arrives at such a prodigious size, that out of one log of it they make a boat capable of carrying so many as forty men.* This tree possesses another quality, which in the judgment of the best observers ought to render it invaluable for the marine service; namely this, it is the only one of those shores which is never attacked by the sea-worm, an insect so formidable to every other species of timber which floats in the seas of that region, as to devour whole squadrons in a very little time, and in order to preserve them, lays us under the necessity for many years past, of sheathing their bottoms with copper. But this beautiful tree has found enemies more dreadful than the worm, in the European inhabitants of those

* Consult Fathers *Lobat* and *Du Tertre*.

Islands, who have almost extirpated the whole race of them.

The manner in which Providence has contrived a supply for the thirst of Man in sultry places is no less worthy of admiration. Nature has placed, amidst the burning sands of Africa, a plant whose leaf, twisted round like a cruet, is always filled with a large glass-full of fresh-water; the gullet of this cruet is shut by the extremity of the leaf itself, so as to prevent the water from evaporating. She has planted on some parched districts of the same country a great tree, called by the Negroes *Boa*, the trunk of which, of a prodigious bulk, is naturally hollowed like a cistern. In the rainy season it receives its fill of water, which continues fresh and cool in the greatest heats, by means of the tufted foliage which crowns its summit. Finally, she has placed vegetable fountains on the parched rocks of the Antilles. There is commonly found on them a lianne, called the water lianne, so full of sap that if you cut a single branch of it, as much water is immediately discharged as a man can drink at a draught: it is perfectly pure and limpid.

In the swamps of the Bay of Campeachy travellers find relief of another kind. Those swamps, on a level with the Sea, are almost entirely inundated in the rainy season, and become so parched on the return of dry weather, that many huntsmen who happen to miss their way in the forests with which they are covered, actually perish with thirst. The celebrated traveller *Dampier* relates that he several times escaped this calamity, by means of a very extraordinary

species of vegetation, which had been pointed out to him on the trunk of a kind of pine very common there ; it resembles a packet of leaves piled one over another in tiers ; and on account of it's form, and of the tree on which it grows, he calls it the pine-apple. This apple is full of water, so that on piercing it at the basis with a knife, there immediately flows from it a good pint of very clear and wholesome water. Father *du Tertre* informs us that he has several times found a similar refreshment in the leaves, rounded like a cornet, of a species of balizier, which grows on the sandy plains of Guadaloupe. I have been assured by many of our sportsmen, that nothing was more proper for the quenching of thirst than the leaves of the mistletoe, which grows on many trees.

Such are, in part, the precautions employed by Providence for compensating, in favour of Man, the inconveniencies of every climate ; by opposing to the qualities of the elements, contrary qualities in vegetables. I shall pursue them no farther, for I believe the subject to be inexhaustible. I am persuaded that every Latitude, and every season, has it's own, which are appropriated to it, and that every parallel varies them in every degree of Longitude.

Vegetable Harmonies of Plants with Man.

Were we now to examine the vegetable relations of plants to Man we should find them to be infinite in number ; they are the perpetual sources of our arts, of our manufactures, of our commerce, and of our enjoyments ; but, in our usual way, we shall just run

over

over a few of our natural and direct relations, with which Man has intermingled nothing of his own.

To begin with their perfumes, Man appears to me the only being endowed with sensibility who is affected by these. Animals, it is granted, and especially bees and butterflies, have certain plants proper to themselves, which attract or repel them by their emanations; but these affections seem to be connected with their necessities. Man alone is sensible to the perfume and lustre of flowers, independently of all animal appetite. The dog himself, who from his domestic habits assumes so powerful a tincture of the manners and of the tastes of Man, appears totally insensible to that enjoyment. The impression which flowers make upon us seems connected with some moral affection; for there are some which enliven us, whereas others dispose us to melancholy, without our being able to assign any other reasons for it than those which I have endeavoured to unfold in examining some general Laws of Nature.

Instead of distinguishing them as yellow, red, blue, violet, we might divide them into gay, into serious, into melancholy: their character is so expressive, that lovers in the East employ their shades to describe the different degrees of their passion. Nature makes frequent use of it relatively to us with the same intention. When she wants to keep us at a distance from a marshy and unwholesome place, she scatters there poisonous plants, which present dingy colours and offensive smells. There is a species of arum which grows in the morasses of Magellan's Strait, whose flower exhibits the appearance of an ulcer, and ex-

hales an odour so strong of putrid flesh that the flesh-fly resorts to it to deposit her eggs.

But the number of fetid plants is of no great extent. The Earth is clothed with flowers which for the most part have very pleasing hues and perfumes. I wish time would permit me to say something of the simple aggregation of flowers. This subject is so vast, and so rich, that I hesitate not to affirm that it presents ample employment for the most famous Botanist in Europe, through his whole life, by discovering to him every day some new beauty, and that without removing above a league from his own habitation. All the art with which jewellers dispose their gems disappears before that which Nature displays in the assortment of flowers.

I shewed *J. J. Roussseau* the flowers of different trefoils which I had picked up, as I was walking with him : some of them were disposed in crowns, in half-crowns, in ears, in sheaves, with colours endlessly varied. While they were yet on their stems they had besides other aggregations, with the plants which were frequently opposed to them, in colours and in forms. I asked him whether Botanists gave themselves any trouble about those harmonies : he told me no ; but that he had advised a young Painter of Lyons to learn Botany, with a particular view to study in it the forms and the assemblages of flowers ; and that he had thus become one of the most celebrated pattern-drawers in Europe. On this subject I quoted to him a passage from *Pliny* with which he was highly delighted : it relates to a Painter of Sicily, named *Paufias*, who learned by means of this study to paint flowers at least

as well as he of Lyons knew how to draw them : he had in truth a master as skilful as Nature herself, or rather one and the same with her, namely, Love.

I shall give this story in the simplicity of style of the old Translator of *Pliny*, in order to preserve all its vivacity.* “ In his youth he became enamoured of
 “ a nosegay girl of the same city with himself ; her
 “ name was *Glycera* ; she was very pretty, and had
 “ a singularly elegant taste in assorting, a thousand
 “ different ways, the flowers of nosegays and chap-
 “ lets ; so that *Pausias*, copying after Nature the
 “ chaplets and nosegays of his mistress, rendered
 “ himself at length perfect in that art. Last of all,
 “ he painted her seated in the attitude of composing
 “ a chaplet of flowers ; and this picture is considered
 “ as his great master-piece : he called it *Stephano-*
 “ *Plocos*, the garland-weaver, because *Glycera* had no
 “ other means of relieving the pressure of poverty,
 “ but making and selling garlands and nosegays.
 “ And it is confidently affirmed that *L. Lucullus* gave
 “ to *Dionysius* of Athens, two talents, for a simple
 “ copy of this picture.”

This anecdote must have been singularly pleasing to *Pliny*, for he has repeated it in another place :† “ Those of Peloponnesus,” says he, “ were the first
 “ who regulated the colours and the smells of the
 “ flowers of which chaplets were composed. It was
 “ however originally the invention of *Pausias*, a
 “ Painter, and of a nosegay-girl named *Glycera* with
 “ whom he was violently in love ; whence he was

* *Pliny's* Natural History, book xxxv. chap. 2.

† Idem, book xxi. chap. 2.

“ engaged to imitate to the life the chaplets and
 “ nosegays which she composed. But the girl varied
 “ in so many ways the arrangement of the flowers of
 “ her chaplets, in order to teize and employ her lover,
 “ that it afforded very high amusement to behold
 “ the skill of the Painter *Pausias*, and the natural
 “ production of *Glycera*, striving for the superiority.”

Ancient Nature is still better acquainted with the subject than is the young *Glycera*. As it is impossible to follow her in her infinite variety, we shall make at least one observation respecting her regularity. It is this, that there is not any one odoriferous flower but what grows at the foot of Man, or at least within reach of his hand. All those of this description are placed on herbage, or on shrubbery, as the heliotrope, the pink, the gilly-flower, the violet, the rose, the lilach. Nothing similar to these grows on the lofty trees of our forests; and if some flowers of brilliant appearance are displayed on certain tall trees of foreign countries, such as the tulip-tree, and the great chestnut of India, they have no very pleasant smell. Some trees of India, it is admitted, as the spice-bearing plants, are perfumed all over; but their flowers are not very showy, and do not partake of the odour of their leaves. The flowers of the cinnamon-tree smell like human excrement: this I know to be true by experience; if however the trees which were shewed to me in the Isle of France, in a plantation belonging to Mr. *Magon*, were the real cinnamon. The beautiful and fragrant flower of the magnolia grows on the lower part of the plant. Besides the
 laurel

laurel which bears it is, as well as spice-trees, a plant of no great elevation.

It is possible I may be mistaken in some of my observations; but supposing them multiplied with respect to the same object, and attested by persons of veracity and exempted from the spirit of system, I am able to deduce general consequences from them which ought not to be a matter of indifference to the happiness of Mankind, by demonstrating to him the invariable intentions of benevolence in the AUTHOR of Nature. The varieties of their adaptation reflect mutual light; the means are different, but the end is constantly the same. The same goodness which has placed the fruit destined for the nourishment of Man within reach of his hand, must have likewise disposed his nosegay with similar attention to his convenience. It may be here remarked, that our fruit-trees are easily scaled, and different in this respect from most forest-trees. Farther, all those which produce fruits that are soft when in a state of perfect maturity, and which would have been liable to be bruised in falling, such as the fig, the mulberry, the plum, the peach, the apricot, present their crop at a small distance from the ground: those, on the contrary, which yield hard fruit, and such as have nothing to risk from falling far, carry it aloft, as walnut-trees, chestnuts, and cocoas.

There is no less marvellousness of adaptation in the forms and sizes of fruits. Many of them are moulded for the mouth of Man, such as cherries and plums; others for his hand, such as pears and apples; others much larger, such as melons, have the sub-divisions marked,

marked, and seem destined to be a social family repast : nay there are some in India, as the jacque, and with ourselves the pumpion, large enough to be divided among a neighbourhood. Nature appears to have observed the same proportions in the various sizes of the fruits destined to the nutriment of Man, as in the magnitude of the leaves which are designed to afford him a shade in hot countries ; for of these some are contrived to be a shelter for a single person, others for a whole family, and others for all the inhabitants of the same hamlet.

I shall not dwell long on the other relations which plants have with the habitation of Man, from their greatness and their attitude, though many very curious observations might be suggested on that subject. There are few of them but what are capable of embellishing his field, his roof, or his wall. I shall only remark that the vicinity of Man is beneficial to many plants. An anonymous missionary says it is firmly believed by the Indians, that the cocoa-trees which have houses around their roots become much more beautiful than those where there are none ; as if that useful tree took delight in being near the habitation of Man.

Another missionary, a bare-footed Carmelite, called Father *Philippe*, positively asserts that when the cocoa-tree is planted close by houses or huts, it is rendered more fruitful by the smoke, by the ashes, and by other circumstances connected with a human dwelling, so as to produce double the quantity of fruit. He adds that, for this reason, the places in India which consist of palm-plantations are crowded with houses
and

and little cabins; and that the proprietors of those plantations give, at first, a pecuniary premium as an inducement to come and live there, together with part of the crop when it is reaped. He farther adds, that though their fruits, which are very large and hard, frequently fall down from the trees when they have attained a state of full maturity, either by the gnawing of the rats, or by the violence of the winds, there is not a single instance known of any person's being hurt by the fall. This appears to me no less extraordinary than it did to him.*

I might extend the influences of Man to several of our fruit-trees, especially to the apple-tree and the vine. I never saw finer apple-trees in the *Pais de Caux*, than those which grow around the habitations of the peasantry. It is true that the attention of the proprietor may have greatly contributed to this. I have sometimes felt myself stopped in the streets of Paris, to contemplate with delight small vines, the roots of which are in the sand, and under the pavement, enriching with their clusters the complete front of a guard-house. One of them, I think about six or seven years ago, produced two crops in one year, as was announced in the public prints.

Animal Harmonies of Plants with Man.

But Nature was not satisfied with having given to Man a bower, and a carpet, loaded with fruit; this would not have thoroughly availed him, had she not likewise furnished him, in the vegetable order itself,

* See Voyage to the East, of R. P. *Philippe*, a white friar. Book vii. chap. 5. section 4.

with the means of defence against the depredations of wild beasts. In vain would he have watched over the preservation of his property through the day, had it been exposed to pillage during the night. She has bestowed a prickly shrubbery to enclose him round and round. The farther we advance southward we find the greater variety in the species of these. But on the contrary we see few, if any, of those thorny shrubs in the North, where they appear useless, there being no orchards to defend. They seem to be produced in both Indies for every kind of situation. Though I have been only on the selvage, as I may say, of those countries, I have seen there a great number of such shrubs, the study of which presented a great variety of curious remarks to a Naturalist.

Among others, I took particular notice of one in a garden on the Isle of France, which to me appeared proper for composing a fence impenetrable to the smallest of quadrupeds. It rises in form of a stake about the thickness of a man's arm, quite straight, without branches, and bearing no verdure except a small bunch of leaves on its summit. Its bark is bristled all over with very strong and very sharp prickles. It attains the height of seven or eight feet, and grows as thick above as below. A series of these shrubs, planted close to each other, would form a real pallisado, without the smallest interval. The opuntia and the taper, so common under the Torrid Zone, are armed with prickles so keen that they pierce the soles of your shoes if you venture to walk over them. There is not a tiger, or lion, or elephant, that dares to approach them. There is another species

cies of thorn in the Island of Ceylon, which is employed as a defence against Man himself, accustomed as he is to force his way through every obstacle. *Robert Knox*, whom I have before quoted, informs us, that the avenues of the kingdom of Candy, in the Island of Ceylon, are blockaded only with fagots of those thorns, with which the inhabitants obstruct the passes of their mountains.

Man finds in vegetables protection not only against ferocious animals, but against reptiles and insects. Father *du Tertre* tells us that he one day found, in the Island of Guadaloupe, at the foot of a tree, a creeping plant, the stem of which presented the figure of a serpent. But he was much more surprised on perceiving seven or eight snakes lying dead around it. He communicated this discovery to a medical man, who, by means of it, performed many wonderful cures, by employing it in the cases of persons bitten by those dangerous reptiles. It is generally diffused over the rest of the Antilles Islands, in which it is known by the name of snake-wood. It is likewise found in the East-Indies. *John Hugo de Linschoten* ascribes to it the same figure, and the same qualities.

We have in our own climates vegetables which present very strange correspondencies and contrasts with reptiles. *Pliny* tells us that serpents are very fond of the juniper and of the fennel, but that they are rarely found under the fern, the trefoil, the ash-weed, and the rue; and that betony kills them. Other plants, as has already been mentioned, destroy flies, such as certain species of the dionæa. *Thevenot* assures

assures us that in the Indies grooms defend their horses from the flies, by rubbing them every morning with the flowers of the pumpion. The fleabane, which bears black and shining grains resembling a flea, clears the house of that vermin, if *Dioscorides* is to be credited. The echium, which has it's seed formed like the head of a viper, is fatal to those reptiles. It is probable, that from such configurations men, in the earlier ages of the World, discovered the relations and the oppositions between plants and animals. I am disposed to believe that each genus of insect has it's destructive vegetable with which we are unacquainted. In general, all vermin shuns perfume.

Nature has farther given us, in plants, the first patterns of nets for hunting and fishing. There grows on certain heaths in China a species of ratan so interwoven and so strong, as to catch and hold fast the stag, though in full vigour. I myself have seen on the sands of the sea-shore in the Isle of France a species of lianne, called the false-potatoe, which covers whole acres like a vast fishing-net. It is so perfectly adapted to this very purpose that the Negroes actually employ it in fishing. They form with the stems and foliage of it a very long series of cordages, which they cast into the sea; and having disposed them in a chain encompassing a great space on the water, they draw it ashore by the two extremities. They scarcely ever fail to bring out fish,* for the fishes are terrified not only by a net which encloses them, but by every unknown substance which forms

* See *Francis Pyard's Voyage to the Maldivias.*

a shade on the surface of the water. By employing an industry equally simple, and nearly similar, the inhabitants of the Maldivia Islands carry on fisheries to a prodigious extent, employing no other means to decoy the fish into their receptacles, except a cord floating on the water with the help of sticks.

Human, or elementary, Harmonies of Plants.

There is not a single plant on the face of the Earth but what has certain relations to the necessities of Man, and which does not serve, somewhere or another, for clothing to him, for a shelter, for pleasure, for medicine, or at least for fuel. Some which with us are entirely useless are in high estimation in other parts of the World. The Egyptians put up frequent and fervent prayers for a plentiful crop of nettles, from the seeds of which they extract an oil, while the stem furnishes them with a thread which they weave into excellent cloth. But those general relations, being innumerable, I shall confine myself to a few particular observations respecting the plants which minister to the first of human wants, I mean the food of Man.

We remark, first, that corn, which serves for the general subsistence of the Human Race, is not produced by vegetables of a lofty stature, but by simple grasses. The principal support of human life is borne on herbage, and is exposed to the merey of every breath of wind. There is reason to believe that had we ourselves been entrusted with the safety of our crops, we should not have failed to place them on great trees; but in this, as well as in every thing else,

else, we are bound to admire Divine Providence, and to mistrust our own wisdom. Had our harvests been the produce of the forests, in the event of these being destroyed by war, or set on fire through our own imprudence, or rooted up by the winds, or ravaged by inundations, whole ages would have been requisite to re-produce them in a country. Farther, the fruits of trees are much more liable to drop off than the seeds of grasses. The grasses, as has been already observed, carry their flowers in an ear, in many cases surmounted by little beards, which do not defend their seeds from the birds, as *Cicero* says, but which serve as so many little roofs to shelter them from the water which falls from Heaven. The drops of the rain cannot drown them, as they do flowers radiated, in disks, in roses, and in umbels, the forms of which however are adapted to certain places and to certain seasons; but those of the grasses are adapted to every exposure.

When they are borne in flowing and drooping plumes, such as those of most grasses of hot countries, they are sheltered from the heat of the Sun; and when collected into an ear, as those of most grasses of cold countries, they reflect his rays on at least one side. Farther, by the suppleness of their stems, strengthened by joints from distance to distance, and by their filiform and capillaceous leaves, they escape the violence of the winds. Their weakness avails them more than strength does the great trees. Like small fortunes, they are re-sown and multiplied by the very same tempests which lay waste the vast forests.

They

They farther resist the effect of excessive dryness by the length of their roots, which go in quest of moisture a great way under ground; and though their leaves are narrow, they have them in such numbers, that they cover the face of the ground with plants endlessly multiplied. At the slightest shower you see them all rear themselves into the air, at their extremities, as if they were so many claws. They even resist conflagration, which consumes so many trees in the forest. I have seen countries in which they every year set the herbage on fire in the season of the drought, recover themselves as soon as it rained with the most lovely verdure. Though this fire be so active as frequently to devour, root and branch, the trees which come into contact with it, the roots of herbage sustain no great injury:

They have, moreover, the faculty of re-producing themselves in three different ways, by shoots which push away from their roots, by creeping branches, which they extend to a distance, and by grains extremely volatile or indigestible, which the winds and the animals scatter about on every side. The greatest part of trees, on the contrary, naturally regenerate themselves only by their seeds. Add to the general advantages of grasses, an astonishing variety of characters in their florification and in their attitudes, which renders them more proper than vegetables of every other class, to grow in every variety of situation.

It is in this cosinopolite family, if I may be allowed the expression, that Nature has placed the principal aliment of Man; for the various species of corns, on

which so many human tribes subsist, are only so many species of grasses. There is no land on the Globe where some kind of corn or another may not be raised. *Homer*, who had studied Nature so accurately, frequently characterizes each country by the vegetable peculiar to it. One island he celebrates for its grapes, another for its olive-trees, a third for its laurels, and a fourth for its palms; but to the Earth only he gives the general epithet of *Ζειδωρα*, or corn-giving. Nature in fact has formed it for growing in all situations, from the Line to the very border of the Frozen Ocean. One species is adapted to the humid places of warm countries, as the rice of Asia, which grows in vast abundance in the muddy swamps by the side of the Ganges. Another is suited to the marshy grounds of cold countries; such is a kind of false-oats which naturally grows on the banks of the rivers of North-America, and of which many savage Nations annually raise immense crops.*

Other kinds of corn thrive wonderfully well on warm and dry lands, as the millet and the pannic of Africa, and the maize of Brasil. In our climates wheat agrees best with a strong soil, rye with a sandy one, buck-wheat with rainy declivities, oats with humid plains, barley with stony ground. Barley succeeds in the very bosom of the North. I have seen as far up as the sixty-first degree of North-Latitude, amidst the rocks of Finland, crops of this grain as beautiful as ever the plains of Palestine produced.

Corn affords an abundant supply to all the neces-

* Consult Father *Hennepin*, a Franciscan : *Champlain*, and other Travellers through North-America.

fities of Man. With it's straw he enjoys the means of lodging, of covering, of warming himself, and of feeding his sheep, his cow, and his horse; with it's grain he can compound aliments and liquors of every flavour. The northern Nations brew it into beer, and distil from it strong waters more potent than those from wine; such are the distillations of Dantzick. The Chinese* extract from rice a wine as agreeable as the best wines of Spain. The Brasilians prepare their *ouicou* with maize. In a word, with oats torrefied it is possible to compose a cream which shall have the perfume of the vanilla. If we unite with these qualities those of the other domestic plants, most of which likewise grow all over the Earth, we shall find in them the favour of the clove, of pepper, of other spiceries; and without going farther than our own gardens, we shall be able to collect the delicacies scattered over the rest of the vegetable Creation.

We may distinguish in the barley and the oats, the elementary characters which have been formerly indicated, and which vary the species of plants of the same genus in a conformity to the situations where they are designed to grow. The barley destined to dry places has leaves broad and open at their base, which convey the rain-water to the root of the plant. The long beards which surmount the coat that is wrapped round the grain, are bristled with denticulations, very much adapted to the purpose of making them adhere to the hair of animals, and of resowing them in lofty and dry situations. The oats,

* Journey to China, by *Istrand-Ides*.

on the contrary, destined to humid places, have narrow leaves, gathered close around the stem, in order to intercept the rain-water. The coats of this plant distended, similar to two long half-bladders, and not very closely adhering to the grain, render it proper for floating, and for crossing the water by the help of the winds. But here we are presented with a still more wonderful fact, which will confirm what has been advanced respecting the uses of the different parts of plants relatively to the elements, and which extends the views of Nature even beyond the fructification, though we have considered this as the determining character; it is that barley, in rainy years, degenerates into oats, and that oats, in dry seasons, change into barley.

This observation, related by *Pliny*, *Galen*, and *Mathiola* the Commentator of *Dioscorides*,* has been confirmed by the experiments of several modern Naturalists. *Mathiola* indeed alleges that this transformation of barley is not into oats properly so called, which he denominates *Bromos*, but into a plant which at first sight resembles it, and to which he gives the name of *Ægilops*. This transformation, demonstrated by the frequently repeated experiments of the husbandmen of his country, and by that which the father of *Galen* made expressly for his own satisfaction; together with that of the flowers of the linarium, and of the leaves of many vegetables, are sufficient proof that the elementary relations of plants are only secondary, and that animal or human relations are the primary. Thus Nature has placed the

* See *Mathiola* on *Dioscorides*, book iv. page 432.

character of a plant not only in the form of the fruit, but in the substance of that very fruit.

Hence I presume, that having formed in general of a mealy substance the basis of human life, Nature has diffused it over all situations, on different species of grasses; that afterwards, intending to add to this certain modifications relative to some humors of the human temperament, or to some influence of season or of climate, she has formed other combinations of it, which she has deposited in leguminous plants, such as pease and beans, which the Romans comprehended in the class of corn-plants; that, finally, she has formed another sort of it, which she has laid up in the fruits of trees, such as chestnuts, or in roots, as potatoes, and other farinaceous under-ground vegetables.

Those adaptations of substance to every climate are so infallibly certain, that, in every country, the fruit most common there is the best and most wholesome. Hence I farther presume that she has followed the same plan with respect to medicinal plants; and that having diffused over various families of vegetables, virtues relative to our blood, to our nerves, to our humors, she has modified them in every Country conformably to the diseases which the climate of each particular country generates, and has placed them in opposition with the particular characters of those same diseases. It is in my opinion from the neglect of these observations, that so many doubts and disputes have been excited respecting the virtues of plants. A simple, which in one country is an infallible cure for a malady, may sometimes increase it in another. The Jesuits-powder, which is the pounded

bark of a species of fresh-water manglier of Mexico, is a remedy for the fevers of America, of a kind peculiar to damp and hot situations, but frequently fails when applied to those of Europe. Every medicine is modified according to the place, just as every malady is.

I shall pursue this reflection no farther, as it would lead me into a deviation from my subject; but if Physicians would pay the attention to it which it merits, they must study more carefully the plants of their own country, and not prefer to them as they generally do those of foreign climates, which they are under the necessity of modifying a thousand different ways, in order to give them, as chance may direct, an adaptation to local maladies. One thing is certain, namely, that when Nature has determined a certain favour in any vegetable, she repeats it all over the Earth with a variety of modifications, which do not however prevent our distinguishing it's principal virtue. Thus, having placed the *cochlearia* (scurvy-grass) that powerful anti-scorbutic, even on the foggy shores of Spitzbergen, she has repeated the favour and the medicinal qualities of it, in the cresses of our brooks, in the garden cresses, in the nasturtium, which is a cress of the rivers of Peru; in a word, in the very grains of the papaya, which grows in humid places of the Antilles Islands. We find in like manner the favour, the smell, and the medicinal qualities of our garlic, in the woods, the barks, and the mosses of America.*

* I must here observe that garlic, the smell of which is so formidable to our fine ladies, is perhaps the most infallible remedy in
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These considerations induce me to believe that the elementary characters of plants, and their entire configuration, are only secondary means, and that their principal

the World against the vapours, and all the nervous disorders to which women are subject. Of this I have had repeated experience. Nay *Pliny* goes so far as to assure us that it is a cure for the epilepsy. It is besides an antiseptic; and every plant which has it's smell has also the same virtues. It is very remarkable that plants which smell like garlic, usually grow in marshy places, as a remedy provided by Nature against the putrid emanations thence exhaled. Such is, among others, the *scordium*. *Galen* relates, that it's antiseptic virtue became demonstrable from this, that after a battle, the dead bodies which happened to be in contact with plants of the *scordium*, were found to be in a much less putrid state than those which were not; and that those bodies remained fresh and sound chiefly in the parts which actually touched the plant. But the experiment which the Baron *Busbequius* made with it upon living bodies, is still more striking. That great Man, on his return from the first journey which he made to Constantinople, was attended by a numerous retinue. A Turk of his suite was attacked with the plague, and died. His companions resolutely divided his spoils among themselves, in defiance of the remonstrances of the Physician of *Busbequius*, who assured them that the pestilence would thereby be immediately communicated. In fact, a few days after, the symptoms of that dreadful malady became apparent among them.

But let us permit the intelligent and virtuous Ambassador himself to give an account of the consequences of this alarming event. "The day after our departure from Adrianople," says he, "they all came to him (the Physician) with a sad and dejected air, complaining of a violent head-ach, and imploring relief. They were perfectly sensible that they were affected with the first symptoms of the pestilence. My Physician reprimanded them severely, saying he was astonished how they dared to apply to him for a remedy from an evil of which he had forewarned them, and which they had obstinately persisted in bringing upon themselves. Not however that he intended to withhold any

principal character is referable to the necessities of Man. Thus, in order to establish in plants an order simple and agreeable, instead of running over successively their elementary, vegetable, animal, and human harmonies, it would be more proper to invert this order, but without changing it, and to set out with the plants which present to Man a supply for his first

“ assistance which might be in his power. On the contrary, he
 “ became extremely uneasy about the means of relieving them ;
 “ But where was the possibility of finding medicine on a road
 “ frequently subjected to a failure of the most common necessities
 “ of life ? Providence became our only refuge, and we were
 “ effectually succoured in this trying hour. I shall relate in what
 “ manner.

“ It was my custom, on our arrival at the different halting-
 “ places on the road, to go a walking in the vicinity, and to take
 “ a view of every thing curious. That day I was so fortunate as
 “ to bend my course to an adjacent meadow. My eye happened
 “ to catch sight of a plant with which I was unacquainted : I
 “ picked up some of it’s leaves, and put them to my nose : they
 “ smelled of garlic. I handed them to my Physician, asking him
 “ if he knew the plant. After having attentively examined it,
 “ he replied that it was the scordium.- He lifted up his hands
 “ to Heaven, and gave thanks to God for the seasonable relief
 “ which He had sent us. He instantly gathered a considerable
 “ quantity, put it into a large kettle, and boiled it thoroughly.
 “ Then, calling for the patients, desired them to take courage,
 “ and without the loss of a moment made them drink copiously
 “ of the decoction of that plant, with a slight infusion of the
 “ earth of Lemnos : he then had them well warmed and put to
 “ bed, desiring them not to go to sleep till they had fallen into a
 “ profuse perspiration, with which they exactly complied. The
 “ next day they felt themselves greatly relieved. A similar dose
 “ was repeated, and the whole ended in a perfect cure. Thus,
 “ through the goodness of God we escaped a death which stared
 “ us immediately in the face.” (Letters of the Baron *Busbecquius*,
 vol. i. pages 197 and 198.)

wants,

wants, to proceed thence to the use which animals derive from them, and to conclude with the situations which determine their varieties.

This order may be followed so much the more easily, that the first point of departure is fixed by the smell and the taste. The testimony of these two senses is far from being contemptible; for they assist us in ascertaining the intimate qualities of plants, much better than the decompositions of Chemistry; it may be extended to the whole vegetable kingdom, inasmuch as there is not a single genus of plants, varied into umbelliferous, rose-formed, papilionaceous, and the rest, but what presents food to Man, in some part or another of the Globe. The ciperus of Ethiopia bears at it's root bulbs which have the taste of almonds. That which in Italy is called *Trafi* produces bulbs which taste like chestnuts.* We have found, in America, the potatoe in the class of *solana*, which are poisons. It is a jasmine of Arabia, which supplies us with the coffee-berry. The eglantine with us produces berries fit only for the use of birds; but that of the Land of Yesso, which grows there among rocks and the shells on the sea-shore, bears cups so large and so nourishing, that they serve for food to the inhabitants of those shores, for a considerable part of the year.† The ferns of our hills are unproductive; but there grows in North-America a species of this plant, called *Filix baccifera*, loaded with berries which

* See the Catalogue of Garden-Plants of Boulogne, by *Hyacinth Ambrosino*.

† Consult Collection of Voyages by *Thevenot*.

are very good to eat.* The tree itself of the Molucca Islands, called *Libbi* by the inhabitants, and palm-fagoe by travellers, is in the judgment of our Botanists merely a fern. This fern contains in it's trunk the fagoe, a substance lighter and more delicate than rice. In a word, there are even certain species of sea-weed which the Chinese eat with delight, among others those which compose the nests of a species of swallow.

By disposing in this order therefore the plants which produce the principal subsistence of Man, as the grasses, we should have, first, for our own country, the wheat of strong lands, the rye of the sands, the barley of the rocks, the oats of humid places, the buck-wheat of rainy declivities; and for other climates and exposures, the pannic, the millet, the maize, the Canadian oats, the rice of Asia, some species of which thrive in dry situations; and so of the rest.

It would be farther useful to ascertain on the Globe the places to which the several origin of each alimentary plant might be referred. What I have to advance on this subject may be conjecture merely, but it appears to me to have an air of probability. I am of opinion, then, that Nature has placed in islands the species of **plants** which are most beautiful, and best adapted to the necessities of Man. First, islands are more favourable to the elementary expansions of plants than the interior of continents, for there is no one but what enjoys the influences of all the elements, being completely surrounded by the winds and the seas, and frequently in it's interior possessing

* See Father *Charlevoix*, his History of New France.

the combined advantages of plains, of sands, of lakes, of rocks, and of mountains. An island is a little world in epitome. Secondly, their particuar temperature is so varied, that you find some of them in all the principal points of Longitude and Latitude, though there be a considerable number still unknown to us, particularly in the South-Seas. Finally, experience demonstrates that there is not a single fruit-tree in Europe but what becomes more beautiful in some of the islands along the coast, than in the Continent.

I have spoken of the beauty of the chestnut-trees of Corsica and Sicily : but *Pliny*, who has preserved to us the origin of the fruit-trees which were in Italy in his time, informs us, that most of them had been imported from the islands of the Archipelago. The walnut came from Sardinia ; the vine, the fig-tree, the olive, and many other fruit-trees, were natives of the other islands of the Mediterranean. Nay he observes that the olive-tree, as well as several other plants, thrive only in the vicinity of the Sea. All modern travellers confirm these observations. *Tavernier*, who had so many times traversed the Asiatic Continent, assures us that no olive-trees are to be seen beyond Aleppo. An anonymous English traveller, whom I have already quoted with approbation, positively asserts that no where on the Continent are there to be found fig-trees, vines, mulberries, as well as many other fruit-trees, once to be compared, either as to magnitude or fertility, with those of the Archipelago, notwithstanding the carelessness and indolence of the wretched possessors. To these I might
add

add a great many other vegetables, which thrive only in those islands, and which furnish to the commerce of Europe, gums, mannas, and dye-stuffs. The apple-tree, so common in France, produces no where such fine fruit, and of species so varied, as on the shores of Normandy, under the breath of the sea-breeze from the West. I have no doubt that the fruit which was proposed as the prize of beauty had, like *Venus* herself, some favourite isle.

If we carry our remarks even into the Torrid Zone, we shall find that it is neither from Asia, nor from Africa, that we obtain the clove, the nutmeg, the cinnamon, the pepper of the best quality, the benzoin, the sandal-wood, the sagoe, and many others, but from the Molucca Islands, or from those which are in the same seas. The cocoa-tree attains its perfect beauty only in the Maldivia Islands. Nay there are in the archipelagos of those Seas, a great number of fruit-trees described by *Dampier* which have not yet been transplanted into the Old Continent; such as the grape-tree. The double cocoa is to be found only in the Sechelles Islands. The islands recently discovered in the South-Sea, such as that of Otahit  , have presented us with trees hitherto unknown, as the bread-fruit and the mulberry-tree, the bark of which serves to make cloth. As much may be said of the vegetable productions of the Islands of America relatively to their Continent.

These observations might be extended even to the very birds and quadrupeds, which are more beautiful, and of species more varied, in islands than any where else. The elephants held in highest estimation
in

in Asia are those of the Island of Ceylon. The Indians believe them to be possessed of something divine ; nay more, they allege that other elephants acknowledge this superiority. One thing is certain, they fetch a higher price all over Asia than any others. In a word, travellers the most worthy of credit, and who have made the most accurate observations, as the English *Dampier*, Father *du Tertre*, and some others, assure us, that there is not a shallow in the seas lying between the Tropics but what is distinguished by some sort of bird, of crab, of turtle, or of fish, which is no where else to be found, either of species so varied, or in so great abundance. I presume that Nature has thus scattered her choicest benefits over the islands, in order to allure men thither, and to pervade the Earth. These are only conjectures, I grant, but they rarely deceive us when they are founded on the wisdom and goodness of the AUTHOR of Nature.

The finest species of corn, therefore, which is wheat, might be referred to Sicily, where in fact they pretend it was originally found. Fable has immortalized this discovery, by making that island the scene of the amours of *Ceres* ; as well as the birth of *Bacchus*, in the Isle of Naxos, because of the beauty of it's vines. This much is certain, that corn is nowhere indigenous but in Sicily, if however it still perpetuates itself there spontaneously, as the Ancients affirm.

After having determined in the same manner the other human accommodations of the grasses to different situations of ground, we might examine the grasses
which

which exhibit marked relations to our domestic animals, such as the ox, the horse, the sheep, the dog. We might characterize them by the names of these animals. We should have the *gramen bovinum, equinum, ovinum, caninum*. The different species of each of these genera, might afterwards be distinguished by the names of the different places where they are found by the several animals; on the banks of rivers, among rocks, on sands, on mountains; so that by the addition of the epithets, *fluviatile, saxatile, arenosum, montanum*, you might supply in two words, all the verbose phraseology of our botanical compositions.

We might apportion, in like manner, the other grasses to the different quadrupeds of our forests, as to the stag, to the hare, to the wild boar, and so on. These first determinations would require certain experiments to be made on the tastes of animals, but they would be very instructive, and highly amusing. They would have no mixture of cruelty, as most of those of our modern physicks have, by which the wretched animal is bleed alive, poisoned, or suffocated, in order to come at the knowledge of it's propensities. Our experiments would study their appetites only, and not their convulsions. Besides, there are a great many of those preferred and rejected plants already well known to our shepherds. One of them shewed me, in the vicinity of Paris, a gramineous plant which fattens sheep more in a fortnight, than the other species can do in two months. The moment too that the animals perceive it, they run after it with the utmost avidity. Of this I have been an eye-witness. I do not mean however to assert that
each

each species of animal limits it's appetite to a single species of food. It is quite sufficient, in order to establish the order which I am proposing, that each of them gives, in every genus of plant, a decided preference to some one species; and this is confirmed beyond all doubt by experience.

The great class of the gramineous plants being thus apportioned to Man and animals, other plants would present still greater facility in their appropriations, because they are much less numerous. Of the fifteen hundred and fifty species of plants, enumerated by *Sebastian le Vaillant* in the country adjacent to Paris, there are more than a hundred families, among which that of the grasses comprehends, for it's share, eighty-five species, exclusive of twenty-six varieties, and our different sorts of corns. It is the most numerous next to that of mushrooms, which contains a hundred and ten species, and that of mosses, which contains eighty-six. Thus, instead of the systematic classification of botanic Writers, which gives no explanation of the uses of most of the vegetable parts, which frequently confounds plants the most heterogeneous, and separates those of the same genus, we should have an order simple, easy, agreeable, and of an infinite extent, which passing from Man to animals, to vegetables, and to the elements, would discover to us the plants which serve to our use, and to that of other sensible beings, would render to each of them it's elementary relations, to each site on the Earth it's vegetable beauty, and would replenish the heart of Man with admiration and gratitude. This plan appears so much the more conformable

formable to that of Nature, that it is entirely comprehended in the benediction which it's AUTHOR pronounced upon our first parents, saying unto them :
“ Behold, I have given unto you every herb bearing
“ seed, which is upon the face of all the Earth, and
“ every tree, in the which is the fruit of a tree yielding
“ seed, *after it's kind*: to you it shall be for meat :
“ and to every beast of the Earth, and to every fowl
“ of the air, and to every creeping thing that creepeth
“ upon the Earth, wherein there is life, I have given
“ every green herb for meat.”

This benediction is not confined, as far as Man is concerned, to some primordial species in each genus. It is extended to the whole vegetable kingdom, which converts itself into aliment fit for his use by means of the domestic animals. *Linnaeus* has presented to them from eight to nine hundred plants which Sweden produces, and he remarked that of these, the cow eats two hundred and eighty-six; the goat, four hundred fifty-eight; the sheep, four hundred and seventeen; the horse, two hundred and seventy-eight; the hog, one hundred and seven. The first animal refuses only one hundred and eighty-four of them; the second, ninety-two; the third, one hundred and twelve; the fourth, two hundred and seven; the fifth, one hundred and ninety. In these enumerations he comprehends only the plants which those animals eat with avidity, and those which they obstinately reject. The others are indifferent to them. They eat them when necessity requires, and even with pleasure, when they are tender. Not one of them goes to waste. Those

* Genesis, chap. i. ver. 29, 30.

which are rejected by some are a high delice to others. The most acrid, and even the most venomous, serve to fatten one or another. The goat browses on the ranunculus of the meadow, though hot as pepper, on the tithymal and the hemlock. The hog devours the horse tail and henbane. . He did not put the ass to this kind of proof, for that animal does not live in Sweden, nor the rein-deer, which supplies the want of him to so much advantage in northern regions, nor the other domestic animals, such as the duck, the goose, the hen, the pigeon, the cat, and the dog.

All these animals united, seem destined to convert to our advantage every thing that vegetates, by means of their universal appetites, and especially by that inexplicable instinct of domesticity which attaches them to Man; whereas no art can communicate it either to that timid animal the deer, nor even to some of the smaller birds, which seek to live under our protection, such as the swallow, who builds her nest in our houses. Nature has bestowed this instinct of sociability with Man only on those whose services might be useful to him at all seasons; and she has given them a configuration wonderfully adapted to the different aspects of the vegetable kingdom.

I say nothing of the camel of the Arabian, which can travel under a load for several days together without drinking, in traversing the burning sands of Zara; nor of the rein-deer of the Laplander, whose deeply-cleft hoof can fasten, and run along, on the surface of the snow; nor of the rhinoceros of the Siamese and of the Peguan, who with the folds of his

skin, which he can distend at pleasure, is able to disengage himself out of the marshy grounds of Siriam; nor of the Asiatic elephant, whose foot divided into five ergots is so sure on the steep mountains of the Torrid Zone; nor of the lama of Peru, who with his forked feet scrambles over the rocky heights of the Cordeliers. Every extraordinary situation is maintaining for Man a useful and commodious servant.

But without removing from our own hamlets, the single-hoofed horse pastures in the plains, the ponderous cow in the bottom of the valley, the bounding sheep on the declivity of the hill, the scrambling goat on the sides of the rocks; the hog, furnished with a proboscis, rakes up the morafs from the bottom; the goose and the duck feed on the fluviatic plants; the hen picks up every grain that was scattered about and in danger of being lost in the field; the four-winged bee collects a tribute from the small dust of the flowers; and the rapid pigeon hastens to save from loss the grains which the winds had conveyed to inaccessible rocks. All these animals, after having occupied through the day the various sites of vegetation, return in the evening to the habitation of Man, with bleatings, with murmurings, with eries of joy, bringing back to him the delicious produce of the vegetable creation, transformed by a process altogether inconceivable into honey, into milk, into butter, into eggs, and into cream.

I take delight in representing to myself those early ages of the World when men travelled over the face of the Earth, attended by their flocks and herds, laying the whole vegetable kingdom under contribution.

bution. The Sun going before them in the Spring invited them to advance to the farthest extremities of the North, and to return with Autumn bringing up his train. His annual course in the Heavens seems to be regulated by the progress of Man over the Earth. While the Orb of Day is advancing from the Tropic of Capricorn to that of Cancer, a traveller departing on foot from the Torrid Zone may arrive on the shores of the Frozen Ocean, and return thence into the Temperate Zone when the Sun traces backward his progress, at the rate of only four, or at most five leagues a day, without being incommoded the whole journey through with either the sultry heat of Summer, or the frost of Winter. It is by regulating themselves according to the annual course of the Sun that certain Tartar-hordes still travel.

What a spectacle must the virgin Earth have presented to it's first inhabitants, while every thing was as yet in it's place, and Nature not yet degraded by the injudicious labours, or the desperate madness of Man! I suppose them taking their departure from the banks of the Indus, that land which is the cradle of the Human Race, on a progress northward. They first crossed the lofty mountains of Bember, continually covered with snow, which like a rampart encompass the happy land of Cachemire, and separate it from the burning kingdom of Lahor.* They presented themselves to their eyes like vast amphitheatres of verdure, clothed, to the South, with all the vegetables of India, and to the North, with all those of Europe. They descended into the vast basin which

* Consult *Bernier's Description of the Mogul Country.*

contains them, and there they beheld a part of the fruit-trees which were destined one day to enrich our orchards. The apricots of Media, and the peach-trees of Persia skirted, with their blossoming boughs, the lakes, and the brooks of living water which bedew their roots. On leaving the ever-green valleys of Cachemire, they quickly penetrated into the forests of Europe, and went to repose under the foliage of the stately beech and tufted elm, which had as yet shaded only the loves of the feathered race, and which no Poet had hitherto sung. They crossed the boundless meadows which are washed by the Irtis, resembling Oceans of verdure, here and there diversified with long beds of yellow lilies, with stripes of ginzeng, and tufts of broad-leaved rhubarb. Following the track of it's current, they plunged into the forests of the North, under the majestic branches of the fir, and the moving foliage of the birch.

What smiling valleys opened to their view along the rivers side, and invited them to deviate from the road, by promising them objects still more lovely! What hills enamelled with unknown flowers, and crowned with ancient and venerable trees, endeavoured to persuade them to proceed no farther! Arrived on the shores of the Icy Sea a new order of things arose to view. There was now no more night. The Sun encompassed the Horizon round and round; and the mists, dispersed through the air, repeated on different planes the lustre of his rays in rainbows of purple, and parheliions of dazzling radiance. But if the magnificence of the Heavens was multiplied, desolation covered the face of the Earth. The Ocean

was

was hoary with mountains of floating ice, which appeared in the Horizon like towers and cities in ruin; and on the land, nothing was to be seen, in place of groves, but a wretched shrubbery blasted by the winds, and instead of verdant meads rocks clothed with moss. The flocks which had accompanied them must there undoubtedly have perished; but even there Nature had still made provision for the necessities of Man. Those shores were composed of massy beds of coal.* The seas swarmed with fishes, and the lakes with fowls. They must find among the animal tribes servants and assistants: the rein-deer appeared in the middle of the mosses: she presented to those wandering families the services of the horse in her agility, the fleece of the sheep in her fur; and shewing them, like the cow, her four teats, and but one nursing, she seemed to tell them that she was destined like her to share her milk with mothers oppressed by a too numerous offspring.

But the East must have been the part of the Globe which first attracted the attention of Mankind. That place of the Horizon where the Sun arises undoubtedly fixed their wondering eyes, at a period when no system had interposed to regulate opinion. On seeing that great Luminary arising from day to day, in the same quarter of the Heavens, they must have been persuaded that he there had a fixed habitation, and that he had another where he set, as a place of rest. Such imaginations, confirmed by the testimony of their eyes, were, it must be admitted, natural to men destitute of experience, who had attempted to erect

* Professor *Gmelin's* Journey to Siberia.

a tower which should reach to Heaven, and who even in the illumination of more scientific ages believed, as a point of religion, that the Sun was drawn about in a chariot by horses, and retired every evening to repose in the arms of *Thetis*. I presume they would be determined to go in quest of him rather toward the East than toward the West, under the persuasion that they would greatly abridge their labour by advancing to meet him.

It must have been this conviction, I am disposed to think, which left the West, for a long time, in a deserted state, under the very same Latitudes which in the East were swarming with inhabitants, and which first sent men in crowds toward the eastern part of our Continent, where the earliest and most populous Empire of the World, that of China, was formed. What confirms me farther in the belief that the first men who advanced toward the East were engaged in this research, and were in haste to reach their object, is this, that having taken their departure from India, the cradle of the Human Race, like the founders of other Nations, they did not like them people the Earth progressively, as Persia, Greece, Italy, and Gaul were successively, in a westerly direction; but leaving desert the vast and fertile countries of Siam, of Cochinchina, and of Tonquin, which are to this day half barbarous and uninhabited, they never gave up the pursuit till they were stopped by the Eastern Ocean; and they gave to the islands which they perceived at a distance, and on which they did not for a long time acquire the skill to land, the name of *Gepuen*, which we have transformed into Japan, and
which

which in the Chinese language signifies, birth of the Sun.

Father *Kircher* * assures us, that when the first Jesuit Astronomers arrived in China, and there reformed the Calendar, the Chinese believed the Sun and the Moon to be no bigger than they appear to the eye; that on setting they retired to a deep cave, from which they issued next day at the time of rising; and, finally, that the Earth was a plane and smooth surface. *Tacitus*, who has written History with such profound judgment, does not deem it to be beneath him, in that of Germany, to relate the traditions of the western Nations, who affirmed that toward the North-west was the place where the Sun went to bed, and that they could hear the noise which he made on plunging into the waves.

It was from the quarter of the East, then, that the Orb of Day first attracted the curiosity of Mankind. There were likewise tribes which directed their course toward that point of the Globe, taking their departure from the southern part of India. These advanced along the peninsula of Malacca; and familiarized with the Sea, which they coasted most of the way, they were induced to form the resolution of availing themselves of the united accommodation which the two elements present to travellers, by navigating from island to island. They thus pervaded that vast belt of islands, which Nature has thrown into the Torrid Zone, like a bridge intersected by canals, in order to facilitate the communication of the two Worlds. When retarded by tempests or contrary winds, they

* See China illustrated, chap. ix.

drew their barks ashore, cast a few seeds into the ground, reaped the crop, and deferred their re-embarkation till fairer weather, and a season more favourable, encouraged them to venture to sea again.

Thus it was that the early mariners performed their voyages, and that the Phenicians, employed by *Necho* King of Egypt, made the circuit of Africa in three years, departing by way of the Red-Sea, and returning by the Mediterranean, according to the account given of it by *Herodotus*.*

The first Navigators, when they no longer saw islands in the Horizon, paid attention to the seeds which the Sea cast upon the shore of those where they were, and to the flight of the birds which were withdrawing from it. On the faith of these indications, they directed their course toward lands which they had never yet seen. Thus were discovered the immense Archipelago of the Moluccas, the Islands of Guam, of Quiros, of the Society, and undoubtedly many others which are still unknown to us. There was not one but what invited them to land, by presenting some attractive accommodation. Some stretched out along the waves like Nereïds, poured from their urns rills of fresh water into the Sea: it was thus that the island of Juan Fernandez, with its rocks and cascades, presented itself to Admiral *Anson* in the midst of the South-Sea. Others, on the contrary, in the same Ocean, having their centres sunk, and their extremities elevated, and crowned with cocoa-trees, offered to their canoes basons at all seasons tranquil, fringing with fishes and sea-fowls: such is

* *Herodotus*, book iv.

that known by the name of *Woesterland*, or the Land of Water, discovered by the Dutch Navigator *Schouten*. Others, in the morning, appeared to them in the bosom of the azure main, all over irradiated with the light of the Sun, as that one of the same Archipelago which goes by the name of *Aurora*. Some announced themselves in the darkness of night by the flames of a volcano, as a pharos blazing aloft amidst the waters, or by the odoriferous emanations of their perfumes.

There was not one of them of which the woods, the hills, and the downs, did not maintain some animal, naturally familiar and gentle, but which becomes savage only from the cruel experience which it acquires of Man. They saw fluttering around them, as they disembarked on their strands, the silken-winged birds of paradise, the blue pigeons, the cacaotès all over white, the lauris all red. Every new island tendered them some new present; crabs, fishes, shells, pearl-oysters, lobsters, turtles, ambergris; but the most agreeable, beyond all doubt, were the vegetables. Sumatra displayed on her shores, the pepper plant; Banda, the nutmeg; Amboyna, the clove; Ceram, the palm-sage; Florès, the benzoin and sandalwood; New-Guinea, groves of cocoa-trees; Otaheité, the bread-fruit. Every island arose in the midst of the Sea like a vase which supported a precious vegetable. When they discovered a tree laden with unknown fruit, they gathered some branches of it, and ran to meet their companions with shouts of joy, exhibiting to them this new benefit bestowed by Nature.

From

From those early voyages, and from those ancient customs it is, that there has been diffused over all Nations, the practice of consulting the flight of birds before engaging in any enterprize, and that of going to meet strangers with the branch of a tree in the hand, in token of peace, and of joy at sight of a present from Heaven. These customs still exist among the islanders of the South-Sea, and among the free tribes of America. But not fruit-trees alone fixed the attention of the first Men. If some heroic action, or some irreparable disaster, had excited admiration, or inspired regret, the tree adjoining was ennobled by it. They preferred it, with those fruits of virtue or of love, to such as produced food or perfume. Thus in the islands of Greece and of Italy, the laurel became the symbol of triumph, and the cypress that of eternal sorrow. The oak supplied crowns of undecaying honour to the well-deserving citizen, and simple grasses decorated the brows of the men who had saved their Country. O Romans! ye were a people worthy of the Empire of the World, in that you opened to every one of your subjects the career of virtuous exertion, and culled the most common plants of the field to serve as the badge of immortal glory, that a crown for the head of virtue might be found on every spot of the Globe.

From similar attractions it was, that from island to island the Nations of Asia made their way to the New World, where they landed on the shores of Peru. Thither they carried the name of children of that Sun whom they were pursuing. This brilliant chimera emboldened them to attempt the passage to America.

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It was not dissipated till they reached the shores of the Atlantic Ocean : but it diffused itself over the whole Continent, where most of the Chiefs of the Nations still assume the title of Children of the Sun.*

Mankind,

* I do not mean to affirm, however, that America was peopled only from the islands of the South-Sea. I believe that a passage was opened into it likewise by the North of Asia and of Europe. Nature always presents to Mankind different means for the attainment of the same end. But the principal population of the New World came from the islands of the South-Sea. This I am able to prove by a multitude of monuments still existing, and to the most remarkable of which I shall confine myself. It is demonstrated then by the worship of the Sun, established in India, in the islands of the South-Sea, and in Peru, as well as by the title of Suns, or Children of the Sun, assumed by many families of those countries ; by the traditions of the Caraïbs scattered over the Antilles, and in Brasil, who give themselves out as originally from Peru ; by the very establishment of the Monarchy of Peru, as well as that of Mexico, situated on the western coast of America, which looks toward the islands of the South-Sea, and by the populousness of their Nations, which were much more considerable, and more polished than those which inhabited the eastern coasts, which supposes the former to be of a much higher antiquity ; by the prodigious diffusion of the Otaheitan language, the different dialects of which are spread over most of the islands of the South-Sea, and of which words innumerable are to be found in the language of Peru, as has lately been proved by a gentleman of great learning, and even in that of the Malays in Asia, some of which I myself was able to distinguish, particularly the word *maté* which signifies to kill ; by the practices common and peculiar to the Nations of the Peninsula of Malacca, of the islands of Asia, of those of the South-Sea and of Brasil, which are not the inspiration of Nature, such as that of making fermented and intoxicating liquors, and of chewing herbs and roots ; by the channels of the commerce of antiquity which flowed in this direction, such as that of gold, which was very common in Arabia and in the Indies, in the time of the Romans, though there be very few
mines

Mankind, encompassed with so many blessings, continues to be wretched. There is not a single genus of animal but what lives in abundance and liberty, the

mines of that metal in Asia; but above all, by the trade of emeralds, which must have run in that track from remote antiquity, in order to reach the Old Continent, where no mine of that gem is to be found. Hear what is said on this subject by *Tavernier*, who is worthy of credit when he speaks of the commerce of Asia, especially as it relates to jewels. "It is an error of long standing," says he, "which many persons have fallen into, to believe that the emerald was found originally in the East. Most jewellers, on first looking at a high-coloured emerald, are accustomed to say, this is an Oriental emerald. But they are mistaken, for I am well assured, that the East never produced one, either on the Continent, or in it's islands. I have made accurate enquiries into this, in all the voyages I made." He had travelled six times by land through India. Hence it must be concluded, that the so highly valued emeralds of the ancients, came to them from America, through the islands of the South-Sea, through those of Asia, through India, the Red Sea, and, finally, through Egypt, from whence they had them.

To this may be objected the difficulty of navigating against the regular easterly winds, in order to pass from Asia to America, under the Torrid Zone; but, relatively to this subject, I shall repeat, that the regular winds do not blow there from the East, but from the North-east and South-east, and depend so much the more on the two Poles, the nearer you approach toward the Line. This oblique direction of the wind was sufficient for persons who navigated from island to island, and who had contrived barks the least liable to deflection, such as the double proas of the Isles of Guam, the form of which seems to have been preserved in the double balsaes of the coast of Peru. *Schouten* found one of these double proas sailing more than six hundred leagues from the Island of Guam toward America. Besides, it appears likewise that the South-Sea has it's monsoons, which have not hitherto been observed. Hear the remarks made, on the variation of those winds, by an anonymous English Navigator, who sailed round the World, with Sir

Joseph

the greatest part without labour, all at peace with their species, all united to the objects of their choice, and enjoying the felicity of re-perpetuating themselves
by

Joseph Banks and *Mr. Solander*, in the years 1768, 1769, 1770, and 1771, page 83. “The inhabitants of *Otaheité* trade with those
“of the adjacent islands which lie to the eastward, and which we
“had discovered on our passage. During three months of the
“year, the winds which blow from the *West quarter* are very favourable to them for carrying on this traffic.” *Admiral Anson* likewise met with winds from the West, in those Latitudes, which retarded him.

Certain Philosophers explain the correspondencies to be found between the inhabitants of the islands and those of Continents, by supposing islands to be lands once united to the Continent, but now swallowed up by the Ocean, the summit only, and a few of the inhabitants upon it, remaining above the water. But enough has been already said in this Work, to evince that maritime islands are not fragments separated from the Continent, and that they have mountains, peaks, lakes, hills, proportionable to their extent, and directed to the regular winds which blow over their seas. They have vegetables peculiar to themselves, and which no where else attain the same degree of beauty. Farther, had those islands formerly constituted part of our Continent, we should find in them all those of our quadrupeds which are to be met with in all climates; there were no rats nor mice in America, and in the Antilles, previous to the arrival of the Europeans, if we may believe the testimony of the Spanish Historian *Herrera*, and of Father *du Tertre*. We should likewise have found in them the ox, the ass, the camel, the horse, but they contained none of these animals; but plenty of our common poultry, ducks, dogs, swine, as well as among the Islanders of the South-Sea, who themselves had no other of our domestic animals. It is obvious that the first animals, such as the horse and the cow, being of a bulk and weight too considerable, could not possibly, be their utility ever so great, cross the seas in the small canoes of the early Navigators, who on the other hand would have been very careful not to transport with them such vermin as rats and mice.

Finally,

by their families ; wheréas more than the half of Man-kind is doomed to celibacy. The other half curses the bands which have matched him. The greater part tremble at the thought of rearing a progeny, under the apprehension of being incapable to find subsistence for them. The greater part, in order to procure subsistence for themselves, are subjected to painful labours, and are reduced to the condition of slaves to their fellow-creatures. Whole Nations are exposed to perish by famine : others, destitute of territory, are piled a-top of each other, while the greatest part of the Globe is a wilderness.

There are many lands which never have been cultivated ; but there is not one; known to Europeans, which has not been polluted with human blood. The very solitudes of the Ocean gulp down into their abysses vessels filled with men, sunk to the bottom by the hands of men. In cities, to all appearance so flourishing by their arts and their monuments, pride and craft, superstition and impiety, violence and per-

Finally, let us revert to the general Laws of Nature. If all the islands of the South-Sea once formed a Continent, there must have been no sea, then, in the space which they occupy. Now it is indubitably certain, that were you, at this day, to take away from around them, the Ocean by which they are encompassed, and the regular winds which blow over it, you would bläst them with sterility. The islands of the South-Sea form, between Asia and America, a real bridge of communication, with a few arches alone of which we are acquainted, and of which it would not be difficult to discover the rest, from the other harmonies of the Globe. But here I restrain my conjectures on this subject. I have said enough to prove, that the same hand which has covered the Earth with plants and animals for the service of Man, has not neglected the different parts of his habitation.

fidy, are in a state of incessant warfare, and keep the wretched inhabitants in perpetual alarm. The more that society is polished in them, the more numerous and cruel are the evils which oppress them. Is the industry of Man there most exerted, only because he is there most miserable? Why should the Empire of the Globe have been conferred on the single animal which had not the government of it's own passions? How comes it that Man, feeble and transitory, should be animated by passions at once ferocious and generous, despicable and immortal? How is it that, born without instinct, he should have been able to acquire such various knowledge? He has happily imitated all the arts of Nature, except that of being happy. All the traditions of the Human Race have preserved the origin of these strange contradictions; but Religion alone unfolds to us the cause of them. She informs us that Man is of a different order from the rest of animals; that his reason perverted has given offence to the AUTHOR of the Universe; that as a just punishment, he has been left to the direction of his own understanding; that he is capable of forming his reason only by the study of universal reason, displayed in the Works of Nature, and in the hopes which virtue inspires; that by such means alone he can be enabled to rise above the animal, beneath the level of which he is sunk, and to re-ascend, step by step, along the steepy declivity of the celestial mountain from which he has been precipitated.

Happy is he in these days, who instead of rambling over the World, can live remote from Mankind! Happy the man who knows nothing beyond the circumference

cumference of his own Horizon, and to whom even the next village is an unknown land ! He has not placed his affections on objects which he must never more behold, nor left his reputation at the mercy of the wicked. He believes that innocence resides in hamlets, honour in palaces, and virtue in temples. His glory and his religion consist in communicating happiness to those around him. If he beholds not in his garden the fruits of Asia, or the shady groves of America, he cultivates the plants which delight his wife and children. He has no need of the monuments of Architecture to dignify and embellish his landscape. A tree, under the shade of which a virtuous man is reclined to rest, suggests to him sublime recollections ; the poplar in the forest recalls to his mind the combats of *Hercules* ; and the foliage of the oak reminds him of the crowning garlands of the Capitol.



STUDY TWELFTH.

OF SOME MORAL LAWS OF NATURE.

WEAKNESS OF REASON; OF FEELING; PROOFS OF THE
DIVINITY, AND OF THE IMMORTALITY OF THE
SOUL, FROM FEELING.

SUCH are the physical proofs of the existence of the DEITY, as far as the feebleness of my reason has enabled me to produce and arrange them. I have collected perhaps ten times as many; but I perceived that I was after all but at the beginning of my career; that the farther I advanced, the farther it extended itself before me; that my own labour would soon overwhelm me; and that, conformably to the idea of Scripture, nothing would remain to me after a complete survey of the Works of Creation, but the most profound astonishment.

It is one of the great calamities of human life, that in proportion as we approach the source of truth, it flies away from before us; and that when by chance we are enabled to catch some of its smaller ramifications, we are unable to remain constantly attached to them. Wherefore has the sentiment which yesterday exalted me to Heaven, at sight of a new relation of Nature—wherefore has it disappeared to-day? *Archimedes* did not remain always in

an ecstacy, from the discovery of the relations of metals in the crown of King *Hiero*. He after that made other discoveries more congenial to his mind : such as that of the cylinder circumscribed within the sphere, which he gave directions to have engraved on his tomb. *Pythagoras* contemplated at length with indifference, the square of the hypotenuse, for the discovery of which he had vowed, it is said, a whole hecatomb of oxen to *Jupiter*. I recollect that when I first became master of the demonstration of those sublime truths, I experienced a delight almost as lively as that of the great men who were the first inventors of them. Wherefore is it extinguished ? Why do I this day stand in need of novelties to procure me pleasure ? The mere animal is in this respect happier than we are : what pleased him yesterday will likewise give him pleasure to-morrow : he fixes for himself a boundary which he never exceeds ; what is sufficient for him, always appears to him beautiful and good. The ingenious bee constructs commodious cells, but never dreams of rearing triumphal arches, or obelisks, to decorate her waxen city. A cottage was in like manner sufficient for Man, in order to be as well lodged as a bee. What need had he of five orders of Architecture, of pyramids, of towers, of kiosques ?

What then is that versatile faculty, called *reason*, which I employ in observing Nature ? It is, say the Schools, a perception of correspondencies, which essentially distinguishes Man from the beast. Man enjoys reason, and the beast is merely governed by instinct. But if this instinct always points out to the
animal

animal what is best adapted to it's situation, it is therefore likewise a reason, and a reason more precious than ours, in as much as it is invariable, and is acquired without the aid of long and painful experience. To this the Philosophers of the last age replied, that the proof of the want of reason in beasts is this, that they act always in the same manner; thus they concluded, from the very perfection of their reason, that they had none. Hence we may see to what a degree great names, salaries, and associations, may give currency to the greatest absurdities; for the argument of those Philosophers is a direct attack on the Supreme Intelligence itself, which is invariable in it's plans, as animals are in their instinct. If bees uniformly construct their cells of the same figure, it is because Nature always makes bees of the same character.

I do not mean however to affirm that the reason of beasts and that of Man is the same: ours is without dispute much more extensive than the instinct of each animal in particular; but if Man is endowed with an universal reason, Must it not be because his wants are universal? He likewise discerns it is true the wants of other animals; but may it not be relatively to himself that he has made this his study? If the dog gives himself no concern about the oats of the horse, it is perhaps because the horse is not subservient to the wants of the dog.

We possess, notwithstanding, natural adaptations peculiar to ourselves, such as the art of agriculture, and the use of fire. The knowledge of these undoubtedly would demonstrate our natural superiority,

were it not at the same time a proof of our wretchedness. Animals are under no necessity to kindle fires, and to cast seed into the ground, for they are clothed and fed by the hand of Nature. Besides, many of them have in themselves faculties far superior to our sciences, which are, if the truth might be told, foreign to us. If we have discovered some phosphoric substances, the luminous fly of the Tropics has in itself a focus of light which illuminates it during the night. While we are amusing ourselves in making experiments on electricity, the torpedo is employing it in self-defence: and while the Academies and States of Europe are proposing considerable prizes to the person who shall discover the means of determining the Longitude at Sea, the pailleu and the frigate are every day performing a flight of three or four hundred leagues between the Tropics, from East to West, without ever failing to find in the evening the rock from which they took their departure in the morning.

Another mortifying insufficiency presents itself, when Philosophy attempts to employ, in combatting the Intelligence of Nature, that very reason which can be of no use but to discern it. What plausible arguments are detailed, respecting the danger of the passions, the frivolity of human life, the loss of fortune, of honour, of children! You can easily unhouse me, divine *Marcus Aurelius*, and you too, sceptical *Montagne*; but you have not provided for me another home. You put the staff of Philosophy into my hand, and say to me, walk on intrepidly; make the tour of the World, begging your bread; you are
just

just as happy as we in our villas, with our wives, and respected by all around. But here is an evil of which you had no foresight. I have received, in my own country, calumny only as the reward of all my services; I have experienced nothing but ingratitude on the part of my friends, and even of my patrons; I am solitary, and have no longer the means of subsistence; I am a prey to nervous disorders; I stand in need of men, but my soul is troubled at the sight of them, while I reflect on the fatal reasons by which they are united, and feel that there is no possibility of interesting them, but by flattering their passions, and by becoming as vicious as they are. What good purpose does it serve to have studied virtue? It shudders at such recollections, and even without any reflection, merely at the sight of men. The first thing that fails me is that very reason on which you desire me to lean for support. All your fine logic vanishes, precisely at the moment when I have most need of it. Put a reed into the hand of a sick person: the very first thing that will drop from him, when attacked by a fit of illness, is that same reed; if he ventures to rest his whole weight upon it, most probably it will break, and perhaps run through his hand. Death, you tell me, will cure every thing; but in order to die I have no occasion for all this reasoning; besides, I do not drop, in the vigour of life, into the arms of death, but dying and reasoning no longer, still however feeling and suffering.*

* Thus, Religion has greatly the superiority over Philosophy, in as much as she supports us not by our reason, but by our resignation. She would have us not on foot and stirring about, but

What is, once more, that reason of which we boast so triumphantly? As it is nothing more than the relation of objects to our wants, it is reduced then to mere personal interest. Hence it is that we have so many family reasons, reasons of associations, reasons of state; reasons of all countries, and of all ages: hence it is, that the reason of a young man is one thing, and that of an old man another; that the reason of a woman differs from that of a hermit, and a soldier's

stretched on a bed of languishing: not on the theatre of the World, but reposing at the footstool of the Throne of God; not tormented with solicitude about futurity, but confident and composed. When books, honours, fortune, and friends forsake us, she presents us as a pillow for our head, not the recollection of our frivolous and theatrical virtues, but that of our insufficiency; and instead of the arrogant maxims of Philosophy, she demands of us only calmness, peace, and filial confidence.

I must make one reflection more respecting this reason, or which amounts to the same thing, respecting this ingenuity of which we are so vain: namely this, that it appears to be the result of our miseries. It is very remarkable, that the Nations which have been most celebrated for their wit, their arts, and their industry, were the most miserable on the face of the Earth, from their government, their passions, or their discords. Read the history of the lives of most men who have been distinguished by the superiority of their intellectual powers, and you will find that they were extremely miserable, especially in their childhood. One-eyed persons, the lame, the hump-backed have in general more wit than other men, because, from being more disagreeably conformed, they apply their reasoning powers toward observing with more attention the relations of Society, in the view of screening themselves against it's oppression. Their humour it is true is commonly of the sarcastic kind, but this character is sufficiently applicable to what passes in the World for wit. Besides it was not Nature which rendered them malignant, but the raillery, or the contempt, of those with whom they have lived.

from

from a priest's. Every body, says the Duke *de la Rochefoucault*, has reason (is in the right). Yes, undoubtedly, and it is because every one has reason, that no one agrees with another. |

This sublime faculty farther undergoes, from the first moments of it's expansion, a shock so violent, that it is rendered in some sort incapable of penetrating into the field of Nature. I do not speak of our methods and systems, which diffuse false lights over the first principles of human knowledge, by shewing us truth only in books, involved in machinery, and displayed on theatres. I have said something of those obstacles, in the objections which I have ventured to propose against the elements of our Sciences; but the maxims instilled into us from our earliest infancy, *make a fortune, be the first*, are alone sufficient to subvert our natural reason; they exhibit to us the just and the unjust only as they stand related to our personal interests, and to our ambition; they usually attach us to the fortune of some powerful and reputable corps, and render us as it may happen atheists or devotees, debauched or continent, Cartesians or Newtonians, just as they affect the cause which has become our only moving principle.

Good cause then we have to mistrust reason, as from the very first step it misleads us in our researches after truth and happiness. Let us enquire, whether there is not in Man some faculty more noble, more inviolable, and of greater extent. Though, in prosecuting this enquiry, I have to present only views vague and indeterminate, I hope that men more enlightened than I can pretend to be, may one day fix them, and

carry them much farther. In this confidence, with the feeble powers which I possess I am going to engage in a career, which is well worthy the Reader's most serious attention.

Descartes lays this down as the basis of the first natural truths : *I think, therefore I exist*. As this Philosopher has acquired a very high degree of reputation, which he merited besides by his knowledge in Geometry, and above all by his virtues, his argument in proof of existence has been greatly extolled, and dignified with the title of axiom. But, if I am not mistaken, this argument labours under an essential defect, in that it has not the generality of a fundamental principle ; for it implicitly follows, that when a man does not think, he ceases to exist, or at least to have a proof of his existence. It follows farther, that the animal creation, to which *Descartes* denied the power of thought, had no proof that they existed ; and that the greatest part of beings are in a state of non-existence with respect to us, in as much as they excite in us simple sensations merely, of forms, of colours, and of movements, without any reference to thought. Besides, the results of human thought having been frequently employed, from their versatility, to suggest doubts respecting the existence of God, and even of our own, as was the case with the sceptic *Pyrrho*, this reasoning, like all the operations of the human understanding, falls under well-grounded suspicion.

I substitute therefore in place of the argument of *Descartes*, that which follows, as it appears to me both more simple and more general : *I feel, therefore I exist*.

It extends to all our physical sensations, which admonish us much more frequently of our existence than thought does. It has for its moving principle an unknown faculty of the soul, which I call *sentiment*, or mental feeling, to which thought itself must refer; for the evidence to which we attempt to subject all the operations of our reason is itself simply sentiment.

I shall first make it appear, that this mysterious faculty differs essentially from physical sensations, and from the relations presented to us by reason, and that it blends itself in a manner constant and invariable in every thing that we do; so that it is, if I may be allowed the expression, human instinct.

As to the difference of sentiment from physical sensation, it is evident that *Iphigenia* at the altar gives us an impression of a very different nature from that produced by the taste of a fruit, or by the perfume of a flower; and as to that which distinguishes it from a process of the understanding, it is certain that the tears and the despair of *Clytemnestra* excite in us emotions of a very different kind from those suggested by a satire, a comedy, or even if you will by a mathematical demonstration.

Not but that reason may sometimes issue in sentiment, when it presents itself with evidence; but the one is only, with relation to the other, what the eye is with relation to the body, that is an intellectual vision: besides, mental feeling appears to me to be the result of Laws of Nature, as reason is the result of political Laws.

I shall give no farther definition of this obscure principle, but I shall render it sufficiently intelligible,

ble, if I am so happy as to make it felt. And here I flatter myself with success by first stating an opposition between it and reason. It is very remarkable that women, who are always nearer to Nature, from their very irregularities, than men with their pretended wisdom, never confound these two faculties, and distinguish the first by the name of sensibility, or sentiment, by way of excellence, because it is in truth the source of our most delicious affections. They are continually on their guard against confounding, as most men do, the understanding and the heart, reason and sentiment. The one as we have seen is frequently our own work; the other is always the work of Nature. They differ so essentially from each other, that if you wish to annihilate the interest of a Work which abounds in sentiment, you have only to introduce an infusion of reasoning.

This is a fault which the most celebrated Writers have committed, in all the ages in which Society completes it's separation from Nature. Reason produces many men of intelligence in ages pretendedly polished; and sentiment, men of genius, in ages pretendedly barbarous. Reason varies from age to age, and sentiment is always the same. The errors of reason are local and changeable, but the truths of sentiment are invariable and universal. Reason makes the I Greek, the I Englishman, the I Turk; and sentiment, the I Man, and the I Divine. We stand in need at this day of commentaries, in order to understand the books of antiquity which are the work of reason, such as those of most Historians, and Poets, satyrical and comic, as *Martial*, *Plautus*, *Ju-*
venal,

venal, and even those of the past age, as *Boileau* and *Moliere* ; but none will ever be necessary in order to be moved by the supplications of *Priam* at the feet of *Achilles*, by the despair of *Dido*, by the tragedies of *Racine*, and the lively fables of *La Fontaine*. We frequently stand in need of many combinations, for the purpose of bringing to light some concealed reason of Nature ; but the simple and pure sentiments of repose, of peace, of gentle melancholy, which she inspires, come to us without effort.

Reason, I grant, procures for us pleasures of a certain kind ; but she discovers to us some small portion of the order of the Universe, she exhibits to us at the same time our own destruction attached to the Laws of it's preservation ; she presents to us at once the evils which are past, and those which are to come ; she furnishes arms to our passions at the very time when she is demonstrating to us their insufficiency. The farther that she carries us, the more are the proofs which she accumulates, when we come back to ourselves, of our own nothingness ; and so far from soothing our pains by her researches, she frequently aggravates them bitterly by the discoveries which she makes. Sentiment, on the contrary, blind in it's desires, embraces the monuments of all countries, and of all ages ; it is soothed to a delicious complacency in the midst of ruins, of combats, and of death itself, in contemplating an undescribable eternal existence ; it pursues, in all it's appetites, the attributes of Deity, infinity, extension, duration, power, grandeur, and glory ; it mingles the ardent desires of these with all our passions ; it thus communicates to them a cer-
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tain sublime impulse ; and, by subduing our reason, itself becomes the most noble, and the most delicious instinct of human life.

Sentiment demonstrates to us, much better than reason, the spirituality of the soul ; for reason frequently proposes to us as an end the gratification of our grossest passions,* whereas sentiment is ever pure in it's propensities. Besides, a great many natural effects which escape the one, are under the control of the other ; such is, as has been observed, evidence itself, which is merely a matter of feeling, and over which reflection exercises no constraint : such too is our own existence. The proof of it is not in the province of reason ; for why is it that I exist ? where is the reason of it ? But I feel that I exist, and this sentiment is sufficient to produce conviction.

This being laid down, I proceed to demonstrate that there are two powers * in Man, the one animal, and

* Listen to the voice of reason, is the incessant admonition of our moral Philosophers. But do they not perceive that they are putting us into the hand of our greatest enemy ? Has not every passion a reason at command ?

* It is from want of attention to those two powers, that so many celebrated performances, on the subject of Man, present a false colouring. Their Authors sometimes represent him to us as a metaphysical object. You would be tempted to think that the physical wants, which stagger even the Saints, are only feeble accessories of human life. They compose it merely of monads, of abstractions, and of moralities. Others discern nothing in man but an animal, and distinguish in him only the coarsest grossness of sense. They never study him without the dissecting knife in their hand, and when he is dead, that is to say when he is man no longer. Others know him only as a political individual : they perceive him only through the medium of the correspondencies of ambition,

and the other intellectual, both of an opposite nature, and which by their union constitute human life ; just as the harmony of every thing on Earth is composed of two contraries.

Certain

ambition. It is not Man that interests them ; it is a Frenchman, an Englishman, a Prelate, a Gentleman.' *Homer* is the only Writer with whom I am acquainted who has painted Man complete : all others, the best not excepted, present nothing but a skeleton of him. The *Iliad* of *Homer*, if I may be allowed to judge, is the painting of every Man, as it is that of all Nature. All the passions are there, with their contrasts and their shades, the most intellectually refined, and the most sensually gross. *Achilles* sings the praises of the Gods to the sound of his lyre, and tends the cookery of a leg of mutton in a kettle. This last trait has given grievous offence to our theatrical writers, who deal in the composition of artificial heroes, namely such as disguise and conceal their first wants, as their authors themselves disguise their own to Society. All the passions of the human breast are to be found in the *Iliad* : furious wrath in *Achilles*, haughty ambition in *Agamemnon*, patriotic valour in *Hector* ; in *Nestor*, unimpassioned wisdom ; in *Ulysses*, crafty prudence ; calumny in *Thersites* ; voluptuousness in *Paris* ; faithless love in *Helen* ; conjugal love in *Andromache* ; paternal affection in *Priam* ; friendship in *Patroclus* ; and so on : and besides this, a multitude of intermediate shades of all these passions, such as the inconsiderate courage of *Diomedes*, and that of *Ajax*, who dared to challenge the Gods themselves to the combat : then the oppositions of situation and of fortune which detach those characters ; such as a wedding, and a country festival, depicted on the formidable buckler of *Achilles* ; the remorse of *Helen*, and the restless solicitude of *Andromache* ; the flight of *Hector*, on the point of perishing under the walls of his native city, in the sight of his people, whose only defender he was ; and the peaceful objects presented to him at that tremendous moment, such as the grove of trees, and the fountain to which the Trojan young women were accustomed to resort to wash their robes, and where they loved to assemble in happier days.

This

Certain Philosophers have taken pleasure in painting Man as a god. His attitude they tell us is that of command. But in order to his having the air of command it is necessary that others should have that

This divine Genius having appropriated to his heroes a leading passion of the human heart, and having put it in action in the most remarkable phases of human life, has allotted in like manner the attributes of God to a variety of Divinities, and has assigned to them the different kingdoms of Nature ; to *Neptune*, the Ocean ; to *Pluto*, the infernal regions ; to *Juno*, the air ; to *Vulcan*, the fire ; to *Diana*, the forests ; to *Pan*, the flocks ; in a word, the Nymphs, the Naiads, nay the very Hours, have all a certain department on the Earth. There is not a single flower but what is committed to the superintendence of some Deity. It is thus that he has contrived to render the habitation of Man celestial. His Work is the most sublime of Encyclopedias. All the characters of it are so exactly in the human heart, and in Nature, that the names by which he has designed them have become immortal. Add to the majesty of his plans a truth of expression which is not to be ascribed alone to the beauty of his language, as certain Grammarians pretend, but to the vast extent of his observation of Nature. It is thus, for example, that he calls the Sea *impurpled*, at the moment that the Sun is setting ; because that then the reflexes of the Sun in the Horizon render it of that colour, as I myself have frequently remarked. *Virgil*, who has imitated him closely, abounds in these beauties of observation, to which Commentators pay very little, if any, attention. In the *Georgics*, for instance, *Virgil* gives to the Spring the epithet of *blushing* ; *vere rubenti*, says he. As his Translators and Commentators have taken no pains to convey this, any more than a multitude of similar touches, I was long impressed with the belief that this epithet was introduced merely to fill up the measure of the verse : but having remarked that early in Spring, the shoots and buds of most trees assumed a ruddy appearance, previously to throwing out their leaves, I thence was enabled to comprehend what was the precise moment of the season which the Poet intended to describe by *vere rubenti*.

of submission, without which he would find an enemy in every one of his equals. The natural empire of Man extends only to animals; and in the wars which he wages with them, or in the care which he exercises over them, he is frequently constrained to drop his attitude of emperor, and to assume that of a slave.

Others represent Man as the perpetual object of vengeance to angry Heaven, and have accumulated on his existence, all the miseries which can render it odious to him. This is not painting Man. He is not formed of a simple nature like other animals, each species of which invariably preserves its proper character; but of two opposite natures, each of which is itself farther subdivided into several passions, which form a contrast. In virtue of one of these natures he unites in himself all the wants, and all the passions of animals; and in virtue of the other, the ineffable sentiments of the Deity. It is to this last instinct, much more than to his reflective powers, that he is indebted for the conviction which he has of the existence of God; for I suppose that having by means of his reason, the faculty of perceiving the correspondencies which exist between the objects of Nature, he found out the relations which subsist between an island and a tree, a tree and a fruit, a fruit and his own wants; he would readily feel himself determined, on seeing an island, to look for food upon it: but his reason, in shewing him the links of four natural harmonies, would not refer the cause of them to an invisible Author, unless he had the sentiment of it deeply impressed on his heart. It would stop short at the point where his perceptions stopped, and where those

those of animals terminate. A wolf which should swim over a river in order to reach an island on which he perceived grafs growing, in the hope of there finding sheep likewise, has an equal conception of the links which connect the four natural relations of the island, the grafs, the sheep, and his own appetite : but he falls not down prostrate before the intelligent Being who has established them.

Considering Man as an animal, I know of no one to be compared with him in respect of wretchedness. First of all he is naked, exposed to insects, to the wind, to the rain, to the heat, to the cold, and laid under the necessity, in all countries, of finding himself clothing. If his skin acquires in time sufficient hardness to resist the attacks of the elements, it is not till after cruel experiments which sometimes slay him from top to toe. He knows nothing naturally as other animals do. If he wants to cross a river, he must learn to swim ; nay he must in his infancy be taught to walk and to speak.* There is no country so happily situated in which he is not obliged to prepare his food with considerable care and trouble. The banana and the bread-fruit tree give him between the Tropics provisions all the year round ; but then he must plant those trees, he must enclose them within thorny fences to preserve them from the beasts ; he must dry part of the fruits for a supply during the hurricane season ; and must build repositories in which to lay them up. Besides those useful vegetables are reserved for certain privileged islands alone ; for over

* The very name of infant is derived from the Latin word *infans*, that is to say, one who cannot speak.

the rest of the Earth the culture of alimentary grains and roots requires a great multitude of arts and preparations. Suppose him to have collected around him every blessing that his heart can desire, the love and the pleasure which flow from abundance, avarice, thieves, the incursions of the enemy, disturb his enjoyment. He must have Laws, Judges, magazines, fortresses, confederacies, and regiments, to protect from without and from within his ill-fated corn-field. Finally, when it is in his power to enjoy with all the tranquillity of a sage, languor takes possession of his mind; he must have comedies, balls, masquerades, amusements to prevent him from reasoning with himself.

It is impossible to conceive how a Nation could exist with the animal passions simply. The sentiments of natural justice, which are the basis of legislation, are not the results of our mutual wants, as has been by some pretended. Our passions are not retrogressive; they have ourselves alone for their centre. A family of savages, living in the midst of plenty, would be no more concerned about the misery of their neighbours perishing for want, than we concern ourselves at Paris to think that our sugar and coffee are costing Africa rivers of tears.

Reason itself, united to the passions, would only stimulate their ferocity; for it would supply them with new arguments long after their desires were gratified. It is, in most men, nothing more than the relation between beings and their wants, that is their personal interest. Let us examine the effect of it,

combined with love and ambition, the two tyrants of human life.

Let us first suppose a state entirely governed by Love, such as that on the banks of the Lignon, imagined by the ingenious *d'Urfeius*. I beg leave to ask, Who would be at the trouble of building houses there, and of labouring the ground? Must we not suppose, that such a country would contain servants whose industry should compensate the idleness of their masters? Will not those servants be reduced to the necessity of abstaining from making love, in order that their masters may be incessantly employed in it? Besides, In what manner are the old people of both sexes to pass their time? A fine spectacle for them truly, to behold their children always indulging in the dalliance of the tender passion! Would not such a spectacle become to them a perpetual source of regret, of ill-humour, of jealousy, as it is among those of our own country? Such a government, in truth, were it even in the islands of the South-Sea, under groves of the cocoa and bread-fruit trees, where there was nothing to do but to eat and make love, would soon be torn with discord and oppressed with languor.

But, on the supposition that the principle of *social reason* were to oblige every family to labour each for it's own support, and to introduce more variety into their way of living, by inviting to it our arts and sciences; it would quickly accelerate their destruction. We must by no means depend on ever hearing there any of those affecting dialogues which *d'Urfeius* puts into the mouth of *Asiræa* and *Celadon*; they
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are dictated neither by animal love, nor by enlightened reason. Both of these employ a very different logic. When a lover, illuminated there with the science which he had borrowed of us, wished to inspire his mistress with a mutual passion, if however it were needful to employ discourse in order to accomplish this, he would talk to her of springs, of masses, of attractions, of fermentations, of the electric spark, and of the other physical causes which determine, according to our modern systems, the propensities of the two sexes, and the movements of the passions. *Political reasons* would interpose, and affix the seal to their union, by stipulating, in the melancholy and mercenary language of our contracts, for dowries, maintenances, redemptions, pin-monies, post-obits. But the *personal reason* of each contracting party would quickly separate them. As soon as a man saw his wife overtaken with disease, he would say to her: "My temperament calls for a wife who enjoys health, and constrains me to abandon you." She would answer him undoubtedly in order to preserve consistency: "You do well to obey the dictates of Nature. I should in like manner, have looked out for another husband had you been in my place." A son would say to his aged and declining father: "You begot me for your pleasure, it is time that I should live for mine." Where should we find citizens disposed to unite for maintaining the laws of such a Society? Where find soldiers disposed to meet death in defence of it, and a magistrate who would undertake to govern it? I say nothing of an infinite number of other disorders, which follow in the train

of that blind and headstrong passion, even when directed by cool and dispassionate reason.

If, on the other hand, a Nation were under the dominion of ambition solely, it would come still sooner to destruction ; either from external enemies, or by means of it's own citizens. It is, first, difficult to imagine how it could be reduced to form, under the authority of one Legislator, for how can we conceive the possibility of ambitious men voluntarily submitting to another man ? Those who have united them, as *Romulus*, *Mahomet*, and all founders of Nations, have commanded attention and obedience only by speaking in the name of the DEITY. But supposing this union by whatever means accomplished, Could such an association ever be happy ? Let Historians extol conquering Rome ever so highly, Is it credible that her citizens then deserved the appellation of fortunate ? What, while they were spreading terror over the Globe, and causing floods of tears to flow, were there at Rome no hearts oppressed with terror, and no eye overflowing for the loss of a son, of a father, of a husband, of a lover ? Were the slaves, who constituted by far the greatest part of her inhabitants, were they happy ? Was the General of the Roman army himself happy, crowned with laurels as he was, and mounted on a triumphal car, around which, in conformity to a military Law, his own soldiers were singing songs in which his faults were exposed, to prevent his waxing proud and forgetting himself ? And when Providence permitted *Paulus Emilius* to triumph over a King of the Macedonians, and his poor children, who stretched out
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their little hands to the Roman People to excite compassion, it was so ordered, that the conqueror should at that very season suffer the loss of his own children, that no one might be allowed to triumph with impunity over the tears of Mankind.

This very People, however, so disposed to pursue their own glory through the calamity of others, were obliged, in order to dissemble the horror of it, to veil the tears of the Nations with the interest of the Gods, as we disguise with fire the flesh of the animals which is to serve for food. Rome, following the order of destiny, was to become at length the capital of the World. She armed her ambition with a *celestial reason*, in order to render her victorious over powers the most formidable, and to curb by means of it the ferocity of her own citizens, by inuring them to the practice of sublime virtue. What would they have become, had they given themselves up without restraint to that furious instinct? They would have resembled the savages of America, who burn their enemies alive, and devour their flesh still streaming with blood. This Rome at last experienced, when her Religion presented no longer any thing to her enlightened inhabitants except unmeaning imagery. Then were seen the two passions natural to the heart of Man, ambition and love, inviting to a residence within her walls the luxury of Asia, the corruptive arts of Greece, proscriptions, murders, poisonings, conflagrations, and giving her up a prey to barbarous Nations. The Theutates of the Gauls then issuing from the forests of the North, and arriving

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living at the Capitol, made the Roman *Jupiter* to tremble in his turn.

Our *reasons of state* are in modern times less sublime, but are not for that less fatal to the repose of Mankind, of which a judgment may be formed by the wars of Europe, which are continually disturbing the Globe. A Nation delivered up to its passions, and to simple *reasons of state*, would speedily accumulate upon itself all the miseries incident to humanity; but Providence has implanted in the breast of Man a sentiment which serves as a counterbalance to the weight of these, by directing his desires far beyond the objects of this World; the sentiment I mean is that of the existence of the DEITY. Man is not Man because he is a reasonable animal, but because he is a religious animal.

It is remarked by *Cicero* and *Plutarch*, that there was not a single People known up to their time, among whom there were no traces of religion to be found. The sentiment of DEITY is natural to Man. It is that illumination which *St. John* denominates *the true Light, which lighteth every Man that cometh into the World*. I find great fault with certain modern Authors, and even some of them Missionaries, for having asserted that certain Nations were destitute of all sense of DEITY. This is in my apprehension the blackest of calumnies with which a Nation can be branded, because it of course entirely strips them of the existence of every virtue; and if such a Nation betrays any appearance of virtue, it can only be under the impulse of the most abominable vices, which is hypocrisy:

erify : for there can be no virtue distinct from Religion. But there is not a single one of those inconsiderate Writers, who does not at the same time himself furnish the means of refuting his own imputation ; for some of them acknowledge that these very atheistical Nations on certain days present homage to the Moon ; or that they retire into the woods to perform certain ceremonies, the knowledge of which they carefully conceal from strangers.

Father *Gobien*, among others, in his History of the Mariannes Islands, after having affirmed that their inhabitants had no knowledge of any Deity, and discovered not the slightest idea of Religion, tells us immediately after that they practise invocation of the dead, to whom they give the appellation of *anitis*, whose skulls they preserve in their houses, and to which they ascribe the power of controlling the elements, of changing the seasons, and of restoring health ; that they are persuaded of the immortality of the soul, and acknowledge a Paradise and a Hell. Such opinions clearly demonstrate that they have ideas of the DEITY.

All Nations have the sentiment of the existence of God ; not that they all raise themselves to Him after the manner of a *Newton* and a *Socrates*, in contemplation of the general harmony of his Works, but by dwelling on those of his benefits which interest them the most. The Indian of Peru worships the Sun ; he of Bengal, the Ganges, which fertilizes his plains ; the black Iolof, the Ocean, which cools his shores ; the Samoïède of the North, the rein-deer which feeds him. The wandering Iroquois demands of the

Spirits which preside over the lakes and the forests plentiful fishing and hunting seasons. Many Nations worship their Kings. There is not one of them which, in order to render more dear to men those august dispensers of their felicity, have not called in the intervention of some Divinity for the purpose of consecrating their origin. Such are in general the Gods of the Nations: but when the passions interpose, and darken among them this divine instinct, and blend with it either the madness of ambition, or the seduction of voluptuousness, you behold them prostrating themselves before serpents, crocodiles, and other gods too abominable to be mentioned. You behold them offering in sacrifice the blood of their enemies and the virginity of their daughters. Such as is the character of a People such is its religion. Man is carried along by this celestial impulse so irresistibly, that when he ceases to take the DEITY for his model, he never fails to make one after his own image.

There are therefore two powers in Man, the one animal, the other divine. The first is incessantly giving him the sentiment of his wretchedness; the second constantly awakening in him that of his own excellence: and from their conflicts are produced the varieties and the contradictions of human life.

By means of the sentiment of our wretchedness it is that we become alive to every thing which presents to us the idea of asylum and protection, of ease and accommodation. Hence it is that most men cherish the thought of calm retreats, of abundance, and of all the blessings which bountiful Nature has provided

vided on the Earth to supply our wants. It is this sentiment which gave to Love the chains of *Hymen*, in order that man might one day find the companion of his pains in that of his pleasures ; and that children might be ensured of the assistance of their parents. It is this which renders the warm and easy tradesman so eager after relations of court-intrigues, of battles, and descriptions of tempests, because dangers external and distant increase internal happiness and security. This sentiment frequently mingles with the moral affections : it looks for support in friendship, and for encouragement in commendation. It is this which renders us attentive to the promises of the ambitious man, when we are eager to follow him like slaves, seduced by the ideas of protection with which he amuses us. Thus the sentiment of our wretchedness is one of the most powerful bonds of political society, though it attaches us to the Earth.

The sentiment of Deity impels us in a contrary direction.* It was this which conducted Love to the

* Whenever any one has lost this first of harmonies all the others follow it. Does it not well deserve to be remarked, that all the Writings of Atheists are insufferably dry and uninteresting ? They sometimes fill you with astonishment, but never do they touch the heart. They exhibit caricatures only, or gigantic ideas. They are totally destitute of order, of proportion, of sensibility. I do not exempt from this censure any one except the poem of *Lucretius*. But this very exception, as has been said before, only confirms the truth of my observation ; for when this Poet wished to please, he found himself under the necessity of introducing Deity, as is evident from his exordium, which commences with that beautiful apostrophe ; *Alma Venus*, &c. Every where else, when he sets about a display of the Philosophy of *Epicurus*, his insipidity becomes absolutely insupportable.

altar, and dictated to the lips of the Lover the first vows of fidelity; it devoted the first children to Heaven, while as yet there was no such thing as political Law; it rendered Love sublime, and Friendship generous; with one hand it succoured the miserable, and opposed the other to tyrants; it became the moving principle of generosity and of every virtue. Satisfied with the consciousness of having deserved well of Mankind, it nobly disdained the recompense of applause. When it shewed itself in arts and sciences, it became the ineffable charm which transported us in contemplating them: the moment it withdrew from them, languor succeeded. It is this sentiment which confers immortality on the men of genius who discover to us in Nature new relations of intelligence.

When these two sentiments happen to cross each other, that is, when we attach the divine instinct to perishable objects, and the animal instinct to things divine, our life becomes agitated by contradictory passions. This is the cause of those innumerable frivolous hopes and fears with which men are tormented. My fortune is made, says one, I have enough to last me *for ever*; and to-morrow he drops into the grave. How wretched am I! says another, I am undone *for ever*; and death is at the door to deliver him from all his woes. We are bound down to life, said *Michael Montaigne*, by the inereft toys; by a glass: yes, and wherefore? Because the sentiment of immortality is impressed on that glass. If life and death frequently appear insupportable to men, it is because they associate the sentiment of their end with
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that of death, and the sentiment of infinity with that of life. Mortals, if you wish to live happy, and to die in composure, do not let your Laws offer violence to those of Nature. Consider that at death, all the troubles of the animal come to a period; the cravings of the body, diseases, persecutions, calumnies, slavery of every kind, the rude combats of man's passions with himself, and with others. Consider that at death, all the enjoyments of a moral being commence; the rewards of virtue, and of the slightest acts of justice and of humanity, undervalued perhaps or despised by the World, but which have in some measure brought us nearer, while we were upon the Earth, to a Being righteous and eternal.

When these two instincts unite in the same place, they confer upon us the highest pleasure of which our nature is susceptible; for in that case our two natures, if I may thus express myself, enjoy at once.* I am going to trace a slight sketch of the combination of their harmonies; after which we shall pursue the track of the celestial sentiment which is natural to us, as manifested in our most ordinary sensations.

Let me suppose you then, Reader, disgusted, and wearied out with the disorders of Society, in search of some happy spot toward the extremity of Africa, on which the foot of European never alighted. Sail-

* To these two instincts may be referred all the sensations of life which frequently seem to be contradictory. For example, if habit and novelty be agreeable to us, it is that habit gives us confidence respecting our physical relations, which are always the same; and novelty promises new points of view to our divine instinct, which is ever aiming at the extension of its enjoyments.

ing along the Mediterranean, your vessel is tossed by the violence of the tempest, and shipwrecked upon a rock, just as it is beginning to grow dark. Through the favour of Heaven you scramble safe to land : you flee for shelter to a grotto, rendered visible by the glare of the lightning, at the bottom of a little valley. There, retired to the covert of this asylum, you hear all night long the thunder roaring, and the rain descending in torrents. At day-break you discover behind you an amphitheatre of enormous rocks, perpendicularly steep as a wall. From their bases, here and there start out clumps of fig-trees, covered over with white and purple fruit, and tufts of carobs loaded with brown pods ; their summits are crowned with pines, wild olive-trees, and cypresses bending under the violence of the winds. The echos of these rocks repeat in the air the confused howling of the tempest, and the hoarse noise of the raging Sea, perceptible to the eye at a distance. But the little valley where you are is the abode of tranquillity and repose. In it's mossy declivities the sea-lark builds her nest, and on these solitary firands the mavis expects the ceasing of the storm,

By this time the first fires of *Aurora* are lengthening over the flowery siachys, and over the violet beds of the thyme which clothe the swelling hillocks. The brightening rays disclose to view, on the summit of an adjoining eminence, a cottage overshadowed with trees. Out of it issue a shepherd, his wife, and his daughter, who take the path that leads to the grotto, with vases and baskets on their heads. It is the spectacle of your distress which attracts these good people toward

toward you. They are provided with fire, fruits, bread, wine, clothing, for your relief. They vie with each other in rendering you the offices of hospitality. The wants of the body being satisfied, those of the mind begin to call for gratification. Your eye eagerly wanders along the surface of the deep, and you are enquiring within yourself, "On what part of the " World am I thrown?" The shepherd perceives your anxiety, and removes it, addressing you in these words: "That distant island which you see to the " North is Mycone. There is Delos a little to the " left, and Paros directly in front. That in which " we are is Naxos; you are on that very part of the " island where *Ariadne* was formerly abandoned by " *Theseus*. It was on that long bank of white sand " which projects below into the Sea, that she passed " the days, with her eyes rivetted on that point of " the Horizon where the vessel of her faithless lover " at length ceased to be visible; and into this very " grotto where you now are, she retired at night to " mourn over his departure. To the right, between " these two little hills, on the top of which you behold some confused ruins, stood a flourishing city " named Naxos. Its female inhabitants, touched " with the misfortunes of the daughter of *Minos*, resorted hither to look for her, and to comfort her. " They endeavoured at first to divert her attention by " amusing conversation; but nothing could give her " pleasure but the name and the recollection of her " beloved *Theseus*. These damsels then counterfeited " letters from that Hero, breathing the tenderest " affection, and addressed to *Ariadne*. They flew

" to

“ to deliver them to her, and said, Take comfort,
“ beautiful *Ariadne*. *Theseus* will soon return: *Theseus*
“ thinks of nothing but you. *Ariadne*, in an ecstacy of
“ delight, read the letters, and with a trembling hand
“ hastened to answer them. The Naxian girls took
“ charge of her answers, and promised to have them
“ speedily conveyed to *Theseus*. In this manner they
“ amused her grief. But when they perceived that
“ the sight of the Sea plunged her more and more
“ into melancholy, they decoyed her into those ex-
“ tensive groves which you observe below in the plain.
“ There they invented every species of festivity that
“ could lull her fond regret to rest. Sometimes they
“ formed around her choral dances, and represented,
“ by the linking of their hands, the various windings
“ of the labyrinth of Crete, out of which by her aid
“ escaped the happy *Theseus*: sometimes they affected
“ to put to death the terrible *Minotaur*. The heart
“ of *Ariadne* expanded to the perception of joy at the
“ sight of representations which called to her remem-
“ brance the power of her father, the glory of her
“ lover, and the triumph of her own charms, which
“ had repaired the destiny of Athens: but when the
“ winds conveyed to her ear, through the music of the
“ tabor and of the flute, the distant noise of the bil-
“ lows breaking on the shore from which she saw the
“ cruel *Theseus* take his departure, she turned her
“ face toward the Sea and began to weep. Thus the
“ Naxians were made sensible that unfortunate love
“ can find, in the very lap of gaiety, the means of
“ embittering it's anguish; and that the recollection
“ of pain is to be lost only by losing that of pleasure.
“ They

“ They endeavoured therefore to remove *Ariadne*
“ from scenes and sounds which were continually re-
“ calling the idea of her lover. They persuaded her
“ to visit their city, where they provided for her
“ magnificent banquets, in superb apartments raised
“ on columns of granite. Into these no male was
“ permitted to enter, and no noise from without could
“ make itself heard. They had taken care to cover
“ the pavement, the walls, the doors, and the win-
“ dows, with the richest tapestry, on which were re-
“ presented meadows, vineyards, and enehanting
“ solitudes. A thousand lamps and torches dazzled
“ the eye. They made *Ariadne* seat herself in the
“ midst of them on cushions; they placed a coronet
“ of ivy, with it's black clusters, upon her flaxen
“ hair, and around her pale forehead; then they ar-
“ ranged at her feet urns of alabaster replenished with
“ the choicest wines; they poured them out into
“ cups of gold, which they presented to her, saying;
“ Drink, lovely daughter of *Minos*; this island pro-
“ duces the richest presents of *Bacchus*. Drink, wine
“ dissipates care. *Ariadne*, with a smile, suffered her-
“ self to be persuaded. In a little time the roses of
“ health re-appeared on her countenance, and a re-
“ port was immediately spread over *Naxos* that *Bac-*
“ *chus* was come to the relief of the mistress of *The-*
“ *seus*. The inhabitants, transported with joy, reared
“ a temple to that God, of which you still see some
“ columns and the frontispiece on that rock in the
“ midst of the waves. But wine only added fuel to
“ the love of *Ariadne*. She gradually pined away, a
“ victim to her sad regrets, and even to her fond
“ hopes.

“ hopes. See there, at the extremity of this valley,
 “ on a little hillock covered with marine-wormwood,
 “ is her tomb, and her statue still looking toward the
 “ Sea. You can scarcely now distinguish in it the
 “ figure of a female; but there is even now discerni-
 “ ble in it the restless attitude of a lover. This monu-
 “ ment, as well as every other of the country, has
 “ been mutilated by time, and still more by the hand
 “ of barbarians; but the memory of suffering virtue
 “ is not, on the Earth, at the mercy of tyrants. The
 “ tomb of *Ariadne* is in the possession of the Turks,
 “ and her crown is planted among the stars. As for
 “ us, escaped from the notice of the powers of this
 “ World, by means of our very obscurity, we have
 “ through the goodness of Heaven found liberty at a
 “ distance from the Great, and happiness in a desert.
 “ Stranger, if you are still capable of being affected
 “ by the blessings of Nature, it is in your power to
 “ share them with us.”

At this recital, the gentle tears of humanity trickle
 down the cheeks of his spouse, and of his youthful
 daughter, as she breathes a sigh to the memory of
Ariadne; and I greatly doubt whether an Athiest
 himself, who acknowledges nothing else in Nature
 but the Laws of matter and of motion, could be in-
 sensible to those present correspondencies, and those
 ancient recollections.

Voluptuous men! Greece alone, you tell me, pre-
 sents scenes and points of view so tenderly affecting.
Ariadne accordingly has a place in every garden;
Ariadne presents herself to view in every collection of
 painting. From the turret of your own castle, throw
 your

your eye over the plains below. As the prospect gradually extends, it terminates in a Horizon much more beautiful than that of desolated Greece. Your apartment is more commodious than a grotto, and your sofas much softer than the turf. The undulation and the murmuring sound of your flowery meadows are more grateful to the sense than those of the billows of the Mediterranean. Your money and your own gardens can supply you with greater variety of the choicest wines and fruits than all the islands of the Archipelago could produce. Would you blend with these delights that of Deity? Behold on yonder hill, that small parish-church encircled by aged elms. Among the young women who there assemble, under it's rustic portico, there may be undoubtedly some forlorn *Ariadne*, betrayed by a faithless lover.* She is

* There are in our own plains young females much more respectable than *Ariadne*, to whom our Historians, who make such a parade of virtue, pay no manner of attention. A person of my acquaintance observed one Sunday, at the gate of a country-church, a young woman at prayer, quite alone, while they were chanting vespers within. As he remained some time in the place, he observed, for several Sundays successively, that same young woman, who never once entered the church during the service. Being mightily struck with this singularity of behaviour, he enquired into the meaning of it at some others of the female peasants, who answered him that it must be her own will merely that determined her to stop at the porch, as they knew of nothing that should prevent her going in, adding, that they had frequently urged her to accompany them, but in vain. At last, desirous of having the solution of this mystery, he addressed himself to the young woman herself, whose conduct appeared to him so very extraordinary. She appeared at first somewhat disconcerted, but presently collecting courage, "Sir," said she, "I had a lover
VOL. II. Y " who

is not made of marble but of living flesh and blood ; she is not a Greek but a French-woman ; she is not comforted but insulted by her companions. Visit her humble abode, and soothe her anguish. Do good in this life, which is passing away with the rapidity of a torrent. Do good, not out of ostentation, and by the hands of a stranger ; but for the sake of Heaven, and with your own hand. The fruit of virtue loses it's flavour when gathered by another and not yourself. Ah ! if you would, in person, speak an encouraging word to her, under that load of depression ; if by your sympathy you raise her in her own esteem, you will perceive how, under a sense of your goodness, her forehead is overspread with a blush, her eyes suffused with tears, her convulsive lips move without speaking, and her heart, long oppressed with shame, expand to the approach of a comforter, as to the sentiment of the DEITY. You will then perceive in the human figure, touches far beyond the reach of the chisels of Greece, and the pencil of a *Van Dyk*. The felicity of an unfortunate young woman will cost you much less than the statue of *Ariadne* : and instead of giving celebrity to the name of an artist in your hotel, for a few years, this will immortalize your own, and cause it to last long after you are gone from hence, every time she says to her companions and to her children : “ It was a god “ who came to succour me in the day of my distress.”

“ who took advantage of my frailty. I became pregnant, and “ my lover falling sick, died, without making me his wife. It is “ my desire, that a voluntary exclusion from church for life should “ serve as some atonement for my fault, and as a warning to my “ companions.”

We now proceed to trace the instinct of Divinity in our physical sensations, and shall conclude this Study by the sentiments of the soul which are purely intellectual. Thus we shall attempt to convey a faint idea of the nature of Man.

OF PHYSICAL SENSATIONS:

All the physical sensations are in themselves so many testimonies of our misery. If Man is so sensible to the pleasure of the touch it is because he is naked all his body over. He is under the necessity, in order to clothe himself, of stripping the quadruped, the plant, and the worm. If almost all vegetables and animals are laid under contribution to supply him with food, it is because he is obliged to employ a great deal of cookery, and many combinations, in preparing his aliments. Nature has treated him with much severity; for he is the only one of animals for the wants of which she has made no immediate provision. Our philosophers have not sufficiently reflected on this perplexing distinction. How! a worm provided with it's auger or it's file; the insect enters into life in the midst of a profusion of fruit proper for his subsistence; he by and by finds in himself the means of spinning and weaving his own garment; after that, he transforms himself into a gaudy butterfly, and ranges uncontrolled, abandoning himself to all the delights of love, and re-perpetuating his species without anxiety, and without remorse; whereas the son of a King is born completely naked, amidst tears and groans, standing in need all his life long of the assistance of another; under the necessity of

maintaining an unremitting conflict with his own species, from within, or from without, and frequently finding in himself his most formidable enemy ! Of a truth, unless we are all only children of dust, it would be a thousand times better to enter upon existence under the form of an insect, than under that of an Emperor. But Man has been abandoned to the most abject misery only that he may have uninterrupted recourse to the first of powers.

Of the Sense of Tasting.

There is no one physical sensation but what awakens in Man some sentiment of the DEITY.

To begin with the grossest of all our senses, that which relates to eating and drinking ; all Nations, in the savage state, have entertained the belief that the DIVINITY had need to support life by the same means that men do : hence in all religions the origin of sacrifice. Hence also has farther proceeded, in many Nations, the custom of placing viands on the tombs of the dead. The wives of the American savages extend this mark of solicitude even to infants who die upon the breast. After having bestowed upon them the right of sepulture, they come once a day for several weeks, and press from the nipple a few drops of milk upon the grave of the departed suckling.* This is positively affirmed by the Jesuit *Charlevoix*, who was frequently an eye-witness of the fact. Thus the sentiment of DEITY, and that of the immortality of the soul, are interwoven with our af-

* See Father *Charlevoix*, his Travels through America.

fections the most completely animal, and especially with maternal tenderness.

But Man has not satisfied himself with admitting intellectual beings to a share of his repast, and in some measure with inviting them to his table; he has found the means of elevating himself to their rank, by the physical effects of those very aliments. It is singularly remarkable, that several savage Nations have been discovered who scarcely possessed industry sufficient to procure food for themselves; but not one who had not invented the means of getting drunk. Man is the only animal who is sensible of that pleasure. Other animals are content to remain in their sphere. Man is making perpetual efforts to get out of his. Intoxication elevates the mind. All religious festivals among Savages, and even among polished Nations, end in feasting, in which men drink till reason is gone: they begin it is true with fasting, but intoxication closes the scene. Man renounces human reason that he may excite in himself emotions that are divine. The effect of intoxication is to convey the soul into the bosom of some deity. You always hear toppers celebrating in their songs, *Bacchus*, *Mars*, *Venus*, or the God of Love. It is farther very remarkable, that men do not abandon themselves to blasphemy till they arrive at a state of intoxication; for it is an instinct as common to the soul, to cleave to the DEITY when in it's natural state, as to abjure Him when it is corrupted by vice.

Of the Sense of Smelling.

The pleasures of smell are peculiar to Man ; for I do not comprehend under it the olfactory emanations by which he forms a judgment of his aliments, and which are common to him with most animals. Man alone is sensible to perfumes, and employs them to give more energy to his passions. *Mahomet* said that they elevated his soul to Heaven. Whatever may be in this, the use of them has been introduced into all the religious ceremonies, and into the political assemblies, of many Nations. The *Brazilians*, as well as all the Savages of North-America, never deliberate on any object of importance without smoking tobacco in a calumet. It is from this practice that the calumet is become, among all those Nations, the symbol of peace, of war, of alliance, according to the accessories with which it is accompanied. .

It is undoubtedly from the same custom of smoking, which was common to the Scythians, as *Herodotus* relates, that the caduceus of *Mercury*, which has a striking resemblance to the calumet of the Americans, and which appears like it to have been nothing but a pipe, became the symbol of commerce. Tobacco increases in some measure the powers of the understanding, by producing a species of intoxication in the nerves of the brain. *Lery* tells us that the *Brazilians* smoke tobacco till it makes them drunk. It is to be observed, that those nations have found out the most cephalic plant of the whole vegetable kingdom, and that the use of it is the most universally diffused of all those which exist on the Globe,
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the vine and the corn-plants not excepted. I have seen it cultivated in Finland, beyond Viburg, in about the sixty-first degree of North Latitude. The habit of using it becomes so powerful, that a person who has acquired it, will rather forego bread for a day than his tobacco. This plant is nevertheless a real poison ; it affects at length the olfactory nerves, and sometimes the sight. But Man is ever disposed to impair his physical constitution, provided he can strengthen in himself the intellectual sentiment,

Of the Sense of Seeing.

Every thing that has been said, in detailing certain general Laws of Nature, harmonies, conformities, contrasts, and oppositions, refers principally to the sense of seeing. I do not speak of adaptation or correspondence ; for this belongs to the sentiment of reason, and is entirely distinct from matter. The other relations are in truth founded on the reason itself of Nature, which communicates delight to us by means of colours and forms generative and generated, and inspires melancholy by those which announce decomposition and destruction. But without entering upon that vast and inexhaustible subject, I shall at present confine myself to certain optical effects, which involuntarily excite in us the sentiment of some of the attributes of Deity.

One of the most obvious causes of the pleasure which we derive from the sight of a great tree, arises from the sentiment of infinity kindled in us, by it's pyramidical form. The decrease of it's different tiers of branches and tints of verdure, which are always

lighter at the extremities of the tree than in the rest of it's foliage, give it an apparent elevation which never terminates. We experience the same sensations in the horizontal plan of landscapes, in which we frequently perceive several successive hilly elevations flying away one behind another, till the last melt away into the Heavens. Nature produces the same effect in vast plains, by means of the vapours which rise from the banks of the lakes, or from the channels of the brooks and rivers that wander through them; their contours are multiplied in proportion to the extent of the plain, as I have many a time remarked. Those vapours present themselves on different plans; sometimes they stand still, like curtains drawn along the skirts of the forests; sometimes they mount into columns over the brooks which meander through the meadows: sometimes they are quite gray; at other times they are illumined and penetrated by the rays of the Sun. Under all these aspects they display to us, if I may venture to use the expression, several perspectives of infinity in infinity itself.

I say nothing of the delightful spectaele which the Heavens sometimes present to us in the disposition of the clouds. I do not know of any Philosopher who has so much as suspected that their beauties were subjected to Law. One thing is certain, namely, that no one animal which lives in the light is insensible to their effects. I have spoken in another place somewhat of their characters of amability or terror, which are the same with those of amiable or dangerous animals and vegetables, conformably to those of the days
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and of the seasons which they announce. The Laws of them which I have sketched, will suggest delicious subjects of meditation to any person disposed to study them, excepting those who are determined to apply the mechanical medium of barometers and thermometers. These instruments are good for nothing but the regulation of the atmosphere of our chambers. They too frequently conceal from us the action of Nature; they announce, in most instances, the same temperatures in the days which set the birds a-singing, and in those which reduce them to silence. The harmonics of Heaven are to be felt only by the heart of Man. All Nations, struck by their ineffable language, raise their hands and their eyes to Heaven in the involuntary emotions of joy or of grief.

Reason however tells them that God is every where. How comes it that no one stretches out his arms toward the Earth, or to the Horizon, in the attitude of invocation? Whence comes the sentiment which whispers to them, *God is in Heaven*? Is it because Heaven is the place where light dwells? Is it because the light itself which discloses all objects to us, not being like our terrestrial substances liable to be divided, corrupted, destroyed, and confined, seems to present something celestial in it's substance?

It is to the sentiment of infinity which the sight of the Heavens inspires, that we must ascribe the taste of all nations for building temples on the summit of a mountain, and the invincible propensity which the Jews felt, like other Nations, to worship upon high places. There is not a mountain all over the islands of the Archipelago but what has it's church;

ehureh ; nor a hill in China but what has it's pagoda. If, as some Philosophers pretend, we never form a judgment of the nature of things but from the mechanical results of a comparison with ourselves, the elevation of mountains ought to humiliate our insignificance. But the truth is that these sublime objects, by elevating us toward Heaven, elevate thither the soul of Man by the sentiment of infinity ; and disjoining us from things terrestrial, waft us to the enjoyment of beauties of much longer duration.

The works of Nature frequently present to us several kinds of infinity at once : thus, for example, a great tree, the trunk of which is cavernous and covered with moss, conveys to us the sentiment of infinity as to time, as well as that of infinity in point of elevation. It exhibits a monument of ages when we did not exist. If to this is added infinity of extension, as when we perceive through it's solemn branches objects prodigiously remote, our veneration increases. Go on, and add to all these, the different ridges of it's mass, in contrast with the profundity of the valleys, and with the level of the plains ; it's venerable half-lights, which oppose themselves, and play with the azure of the Heavens ; and the sentiment of our own wretchedness, which it relieves, by the ideas of the protection which it affords in the thickness of it's trunk, immoveable as the rock, and in it's august summit agitated by the winds, the majestic murmurs of which seem to sympathize with our distress : a tree, with all these harmonies, seems to inspire an inexpressible religious awe. *Pliny* says, in conformity to
this

this idea, that the trees were the first temples of the Gods.

The sublime impression which they produce becomes still more profound, when they recal to us some sentiment of virtue, such as the recollection of the great men who planted them, or of those whose tombs they shade. Of this kind were the oaks of Iulus at Troy. It is from an effect of this sentiment that the mountains of Greece and Italy appear to us more respectable than those of the rest of Europe, though they are of no higher antiquity on the Globe, because their monuments, in ruins as they are, call to our remembrance the virtues of the persons who inhabited them. But this subject belongs not to the present article.

In general, the different sensations of infinity increase by the contrasts of the physical objects which produce them. Our Painters are not sufficiently attentive to the choice of those which they introduce into the fore-ground of their pictures. They would give a much more powerful effect to their back-ground scenery, if they opposed to it the frontispiece, not only in colours and forms as they sometimes do, but in nature. Thus, for example, if the Artist wished to communicate an affecting interest to a cheerful and smiling landscape, he would do well to present it through a magnificent triumphal arch, crumbling into ruin by length of time. On the contrary, a city filled with Tuscan and Egyptian monuments would have a still greater air of antiquity, when viewed from under a bower of verdure and flowers. We
ought

ought to imitate Nature, who never produces the most lovely plants in all their beauty, such as mosses, violets, and roses, but at the foot of rustic rocks.

Not but that consonances likewise produce a very powerful effect, especially when they seem to unite objects which are distinct from each other. It is thus, for instance, that the cupola of the College of the Four Nations presents a magnificent point of view, when seen from the middle of the court of the Louvre, through the arcade of that palace which is opposite, for then you view it complete, with a portion of the Heaven under the arch, as if it were a part of the Louvre. But in this very consonance, which gives such an extent to our vision, there is likewise a contrast in the concave form of the arcade, with the convex form of the cupola.

The great art of moving is to oppose sensible objects to intellectual. The soul in that case takes a daring flight. It soars from the visible to the invisible, and enjoys, if I may be allowed the expression, in it's own way, by extending itself into the unbounded fields of sentiment and of intelligence. Among certain Tartar Tribes, when a great man dies, his groom, after the interment, leads out the horse which his master was accustomed to ride, places the clothes which he wore on the horse's back, and walks him, in profound silence, before the assembly, who by that spectacle are melted into tears.

When the suppressed circumstances multiply and unite themselves to some virtuous affection, the emotions of the soul are greatly heightened. Thus when,
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in the *Æneid*, *Iulus* is promising to make presents to *Nisus* and *Euryalus*, who are going in quest of his father to *Palanteum*, he says to *Nisus* :

* Bina dabo argento perfecta atque aspera signis
Pocula, devictâ genitor quæ cepit Arisbâ ;
Et tripodes geminos, auri, duo magna talenta,
Cratera antiquum quem dat Sidonia Dido.

Æneid, Lib. ix. v. 263.

“ I will present you with two silver cups of exquisite workmanship, with curious figures in alto-relievo. They became my father’s property at the capture of Arisba. To these I will add a pair of twin tripods; two talents of massy gold; and an ancient goblet, a token of affection from Queen *Dido*.”

He promises to the two youthful friends, united to each other in the tenderest bonds, double presents, two cups, two tripods to serve as stands for them, after the manner of the ancients, two talents of gold to replenish them with wine, but only one bowl from which they might drink together. And then, what a bowl ! he boasts neither of the materials of which it is composed, nor of the workmanship, as in the case of the other presents ; he connects it with moral qualities infinitely more interesting to the heart of friendship. It is antique ; it was not the prize of

* Two silver cups, emboss’d with nicest art,
I’ll give, of warlike spoils my Father’s part,
When fam’d Arisba fell ; two tripods old ;
A double talent, too, of purest gold ;
Sidonian Dido’s gift shall crown the rest,
A bowl antique, of generous love the test.

violence

violence but the gift of love. *Iulus* no doubt received it as a mark of affection from *Dido*, when she considered herself to be the wife of *Æneas*.

In all the scenes of passion where the intention is to produce strong emotions, the more that the principal object is circumscribed, the more extended is the intellectual sentiment resulting from it. Several reasons might be assigned for this, the most important of which is, that the accessory contrasts, as those of littleness and greatness, of weakness and strength, of finite and infinite, concur in heightening the contrast of the subject. When *Poussin* conceived the idea of a picture of the universal deluge, he confined it to the representation of a single family. There you see an old man on horseback, on the point of drowning; and in a boat, a man, perhaps his son, presents to his wife, who has made shift to scramble up a rock, a little child dressed in a red petticoat, who, on its part, is making every effort with its little feet to get upon the rock. The back-ground of the landscape is frightful from its black melancholy. The herbage and the trees are soaked in water, the Earth itself is penetrated by it, which is rendered visible by that long serpent in eager haste to quit its hole. The torrents are gushing down on every side; the Sun appears in the Heavens like an eye thrust out of its socket: but the most powerful interest in the piece bears upon the feeblest object: a father and a mother ready themselves to perish are wholly engrossed in the preservation of their infant. Every other feeling is extinguished on the Earth, but maternal tenderness is still alive. The human race is destroyed because of its crimes,

crimes, and innocence is going to be involved in the punishment. These unrestrained torrents, that deluged Earth, that lurid Atmosphere, that extinguished Sun, those desolated solitudes, that fugitive family, all the effects of this universal ruin of the World, are wholly concentrated in an infant. There is no one, however, who on viewing the small group of personages which surround it, would not exclaim : “ ‘There’s the Universal Deluge !’ ” Such is the nature of the human soul ; so far from being material it lays hold only of correspondencies. The less you display to it physical objects the more you awaken in it intellectual feelings.

Of the Sense of Hearing.

Plato calls hearing and seeing the senses of the soul. I suppose he qualifies them particularly by this name, because vision is affected by light, which is not properly speaking a substance ; and hearing by the modulations of the air, which are not of themselves bodies. Besides, these two senses convey to us only the sentiment of correspondencies and harmonies, without involving us in matter as smelling does, which is affected only by the emanations from bodies ; tasting by their fluidity ; and touching by their solidity, by their softness, by their heat, and by their other physical qualities. Though hearing and seeing be the direct senses of the soul, we ought not however thence to conclude, that a man born deaf and blind must be an idiot, as some have pretended. The soul sees and hears by all the senses. This has been demonstrated in the case of the blind Princes of Persia,

whose

whose fingers, according to *Chardin's* report, are so astonishingly intelligent, that they can trace and calculate all the figures of Geometry on tables. Such are likewise the deaf and the dumb, whom the *Abbé de l'Epée* is teaching to converse together.

I have no occasion to be diffuse on the subject of the intellectual relations of hearing. This sense is the immediate organ of intelligence; it is that which is adapted to the reception of speech, a faculty peculiar to Man, and which, by its infinite modulations, is the expression of all the correspondencies of Nature, and of all the feelings of the human heart. But there is another language which seems to appertain still more particularly to this first principle of ourselves, to which we have given the name of *sensiment*: I mean music.

I shall not dwell on the incomprehensible power which it possesses of rousing and quieting the passions, in a manner independent of reason, and of kindling sublime affections disengaged from all intellectual perception: its effects are sufficiently known. I shall only observe, that it is so natural to Man, that the first prayers addressed to the DEITY, and the original Laws among all Nations, were set to music. Man loses a taste for it only in polished society, the very languages of which at length lose their accentuation. The fact is, that a multitude of social relations destroy in a state of refinement the correspondencies of Nature. In that state we reason much, but scarcely feel any longer.

The AUTHOR of Nature has deemed the harmony of sounds to be so necessary to Man, that there is not a situation upon the Earth but what has its singing

ing bird. The linnet of the Canaries usually frequents, in those islands, the flinty gutters of the mountains. The goldfinch delights in sandy downs, the lark in the meadows, the nightingale in woods by the side of a brook, the bullfinch, whose note is so sweet, in the white thorn : the thrush, the yellow-hammer, the greenfinch, and all other singing birds, have their favourite post. It is very remarkable that all over the Globe they discover an instinct which attracts them to the habitation of Man. If there be but a single hut in a forest, all the song-birds of the vicinity come and settle around it. Nay none are to be found except in places which are inhabited. I have travelled more than six hundred leagues through the forests of Russia, but never met with small birds except in the neighbourhood of villages. On making the tour of the fortified places of Russian Finland, with the General Officers of the Corps of Engineers in which I served, we travelled sometimes at the rate of twenty leagues a day, without seeing on the road either village or bird. But when we perceived the sparrows fluttering about we concluded we must be drawing near some inhabited place. In this indication we were never once deceived. I relate it with the more satisfaction that it may sometimes be of service to persons who have lost their way in the woods.

Garcillaso de la Vega informs us that his father having been detached from Peru, with a company of Spaniards, to make discoveries beyond the Cordeliers, was in danger of perishing with hunger in the midst of their uninhabited valleys and quagmires. He never could have got out had he not perceived in the

air a flight of paroquets, which suggested a hope that there might be some place of habitation at no great distance. He directed his march to that point of the compass which the paroquets had pursued, and arrived after incredible fatigue at a colony of Indians, who cultivated fields of maize.

It is to be observed, that Nature has not given a musical voice to any one sea or river bird, because it would have been lost in the noise of the waters, and because the human ear could not have enjoyed it at the distance which they are destined to live from the land. If there are swans which sing, as has been alleged by some, their song must consist but of very few modulations, with some resemblance to the uncouth sounds uttered by the duck and the goose. That of the wild swan which came lately and settled at Chantilly has only four or five notes. Aquatic birds have shrill and piercing cries, by means of which they can make themselves heard in the regions of wind and tempest where they inhabit, and are in perfect correspondence with their noisy situations, and with their melancholy solitudes.

The melodies of song-birds have similar relations to the sites which they occupy, and even to the distances at which they live from our habitations. The lark, who nestles among our corn, and delights in soaring perpendicularly till we lose sight of him, makes his voice to be heard in the air after he is no longer perceptible to the eye. The swallow, who grazes the walls of our houses as he flies, and reposes on our chimneys, has a small gentle chirping voice which does not stun the ear, as that of the songsters of the grove

grove would do ; but the solitary nightingale makes himself heard at the distance of more than half a league. He mistrusts the vicinity of man ; and nevertheless always places himself within sight of his habitation, and within the reach of his ear. He chooses, for this effect, places which are the best conductors of sound, in order that their echoing may give more action to his voice. Having stationed himself in his orchestra, he warbles an unknown drama, which has it's exordium, it's exposition, it's recitative, it's catastrophe, intermingled sometimes with the most extravagant bursts of joy, sometimes with bitter and plaintive notes of recollection, which he expresses by long and deep sighs. He raises his song at the commencement of that season which renews the face of Nature, and seems to present Man with a representation of the restless career which lies before him.

Every bird has a voice adapted to the times and the stations of it's destination, and relative to the wants of Man. The loud clarion of the cock calls him up to labour at the dawn of day. The brisk and lively song of the lark, in the meadow, invites the swains and shepherdesses to the dance ; the voracious thrush, which appears only in Autumn, summons the rustic vine-dresser to the vintage. Man alone, on his part, is attentive to the accents of the feathered race. Never will the deer, who sheds tears copiously over his own misfortunes, sigh over those of the complaining Philomel. Never did the laborious ox when led to the slaughter after all his painful services, turn

his head toward her, and say : “ Solitary bird, behold
“ in what manner Man rewards his servants !”

Nature has diffused these distractions, and these consonances of fortune over volatile beings, in order that our soul, susceptible as it is of every wo, finding every where occasions of extending that susceptibility, might every where be enabled to alleviate the pressure. She has rendered insensible bodies themselves capable of these communications. She presents to us frequently in the midst of scenes which pain the eye, other scenes which delight the ear, and soothe the mind with interesting recollections. It is thus that from the bosom of forests she transports us to the brink of the waters, by the rustling of the aspens and of the poplars. At other times she conveys to us, when we are by the side of the brook, the noise of the Sea, and the manœuvres of navigation, in the murmuring of reeds shaken by the wind. When she can no longer seduce our reason by foreign imagery, she lulls it to rest by the charm of sentiment : she calls forth from the bosom of the forests, of the meadows, and of the valleys, sounds ineffable, which excite in us pleasing reveries, and plunge us into profound sleep.

Of the Sense of Touching.

I shall make but a few reflections on the sense of touching. It is the most obtuse of all our senses, and nevertheless it is in some sort the seal of our intelligence. To no purpose is an object exposed to the examination of the eye, in every possible position ; we cannot be persuaded that we know it, unless we
are

are permitted to put it to the touch. This instinct proceeds perhaps from our weakness, which seeks in those approximations points of protection. Whatever may be in this, the sense in question, blunt as it is, may be made the channel of communicating intelligence, as is evident from the example adduced by *Chardin*, of the blind men of Persia, who traced geometrical figures with their fingers, and formed a very accurate judgment of the goodness of a watch by handling the parts of the movement.

Wise Nature has placed the principal organs of this sense, which is diffused over the whole surface of our skin, in our hands and feet, which are the members the best adapted to judge of the quality of bodies. But in order that they might not be exposed to the loss of their sensibility by frequent shocks, she has bestowed on them a great degree of pliancy, by dividing them into several fingers and toes, and these again into several joints; farther, she has furnished them, on the points of contact, with elastic half-pincers, which present at once resistance in their callous and prominent parts, and an exquisite sensibility in the retreating.

It is matter of astonishment to me, however, that Nature should have diffused the sense of touching over the whole surface of the human body, which becomes thence exposed to variety of suffering, while no considerable benefit seems to result from it. Man is the only animal laid under the necessity of clothing himself. There are indeed some insects which make cases for themselves, such as the moth; but they are produced in places where their clothing is, if I may

lay so, ready made. This necessity, which is become one of the most inexhaustible sources of human vanity, is in my opinion one of the most humiliating proofs of our wretchedness. Man is the only being who is ashamed of appearing naked. This is a feeling of which I do not discern the reason in Nature, nor the similitude in the instinct of other animals. Besides, independently of all sense of shame, he is constrained by powerful necessity to clothe himself, in every variety of climate.

Certain Philosophers, wrapped up in good warm cloaks, and who never stir beyond the precincts of our great cities, have figured to themselves a natural Man on the Earth, like a statue of bronze in the middle of one of our squares. But to say nothing of the innumerable inconveniences which must in such a state oppress his miserable existence from without, as the cold, the heat, the wind, the rain, I shall insist only on one inconvenience, which is but slightly felt in our commodious apartments, though it would be absolutely insupportable to a naked man, in the most genial of temperatures, I mean the flies. I shall quote, to this purpose, the testimony of a man whose skin ought to have been proof against this attack: it is that of the free-booter *Raveneau de Luffan*, who in the year 1688, crossed the isthmus of Panama, on his return from the South Seas. Hear what he says, speaking of the Indians of Cape de Gracias a Dios:

“ When they are overtaken with an inclination to go
 “ to sleep, they dig a hole in the sand, in which they
 “ lay themselves along, and then cover themselves
 “ all over with the sand which they had dug out;
 “ this

“ this they do to shelter themselves from the attack
“ of the musquitos, with which the air is so fre-
“ quently loaded. They are a kind of little flies
“ that are rather felt than seen, and are armed with
“ a sting so keen, and so venomous, that when they
“ fix on any one, they seem to dart a shaft of fire into
“ the blood.

“ The poor wretches are so grievously tormented
“ with those formidable insects, when it does not
“ blow, that they become like lepers; and I can
“ affirm it as a serious truth, for I know it from my
“ own experience, that it is no slight evil to be at-
“ tacked by them; for besides their preventing all rest
“ in the night-time, when we were obliged to trudge
“ along with our backs naked for want of shirts, the
“ unceasing persecution of those merciless little ani-
“ mals drove us almost to madness and despair.”*

It is, I am disposed to believe, on account of the troublefomeness of the flies, which are very common, and very necessary, in the marshy and humid places of hot countries, that Nature has placed but few quadrupeds with hair on their shores, but quadrupeds with scales, as the tatou, the armadillo, the tortoise, the lizard, the crocodile, the cayman, the land-crab, bernard-the-hermit, and other scaly reptiles, such as serpents, upon which the flies have not the means of fastening. It is perhaps for this reason likewise that hogs and wild-boars, which take pleasure in frequenting such places, are furnished with hair long, stiff, and bristly, which keep volatile insects at a distance.

* Journal of a Voyage to the South Sea in 1688.

Once more, Nature has not employed, in this respect, any one precaution in behalf of Man. Of a truth, on contemplating the beauty of his forms, and his complete nakedness, it is impossible for me not to admit the ancient tradition of our origin. Nature, in placing him on the Earth, said to him : “ Go, degraded creature, animal destitute of clothing, intelligence without light ; go and provide for thy own wants ; it shall not be in thy power to enlighten thy blinded reason, but by directing it continually toward Heaven, nor to sustain thy miserable life, without the assistance of beings like thyself.” And thus out of the misery of Man sprung up the two commandments of the Law.

OF THE SENTIMENTS OF THE SOUL,

And first, of Mental Affections.

I shall speak of mental affections, chiefly in the view of distinguishing them from the sentiments of the soul : they differ essentially from each other. For example, the pleasure which comedy bestows is widely different from that of which tragedy is the source. The emotion which excites laughter is an affection of the mind, or of human reason ; that which dissolves us into tears is a sentiment of the soul. Not that I would make of the mind and of the soul two powers of a different nature ; but it seems to me, as has been already said, that the one is to the other what sight is to the body ; mind is a faculty, and soul is the principle of it : the soul is, if I may venture thus to express myself, the body of our intelligence.

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I confider the mind then as an intellectual eye, to which may be referred the other faculties of the understanding, as the *imagination*, which apprehends things future; *memory*, which contemplates things that are past; and *judgment*, which discerns their correspondencies. The impreffion made upon us by thefe different acts of vifion, fometimes excites in us a fentiment which is denominated *evidence*; and in that cafe, this laft perception belongs immediately to the foul; of this we are made fenfible by the delicious emotion which it fuddenly excites in us; but, raifed to that, it is no longer in the province of mind; becaufe when we begin to feel we ceafe to reafon; it is no longer vifion, it is enjoyment.

As our education and our manners direct us toward our perfonal intereft, hence it comes to pafs, that the mind employs itfelf only about focial conformities, and that reafon, after all, is nothing more than the intereft of our paffions; but the foul, left to itfelf, is inceffantly purfuing the conformities of Nature, and our fentiment is always the intereft of Mankind.

Thus, I repeat it, mind is the perception of the Laws of Society, and fentiment is the perception of the Laws of Nature. Thofe who difplay to us the conformities of Society, fuch as comic Writers, Satirifts, Epigrammatifts, and even the greateft part of Moralifts, are men of wit: fuch were the Abbé *de Choify*, *La Bruyere*, *St. Evremont*, and the like. Thofe who difcover to us the conformities of Nature, fuch as tragic and other Poets of fenfibility, the Inventors of arts, great Philofophers, are men of genius: fuch

such were *Shakespeare, Corneille, Racine, Newton, Marcus Aurelius, Montesquieu, La Fontaine, Fenelon, J. J. Rousseau*. The first class belong to one age, to one season, to one nation, to one junto; the others to posterity and to Mankind.

We shall be still more sensible of the difference which subsists between mind and soul, by tracing their affections in opposite progresses. As often, for example, as the perceptions of the mind are carried up to evidence, they are exalted into a source of exquisite pleasure, independently of every particular relation of interest; because, as has been said, they awaken a feeling within us. But when we go about to analyze our feelings, and refer them to the examination of the mind, or reasoning power, the sublime emotions which they excited vanish away; for in this case we do not fail to refer them to some accommodation of society, of fortune, of system, or of some other personal interest, whereof our reason is composed. Thus, in the first case, we change our copper into gold; and in the second, our gold into copper.

Again, nothing can be less adapted, at the long-run, to the study of Nature, than the reasoning powers of Man; for though they may catch here and there some natural conformities, they never pursue the chain to any great length: besides there is a much greater number which the mind does not perceive, because it always brings back every thing to itself, and to the little social or scientific order within which it is circumscribed. Thus, for example, if it takes a glimpse of the celestial spheres, it will refer
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the formation of them to the labour of a glass-house; and if it admits the existence of a creating Power, it will represent him as a mechanic out of employment, amusing himself with making globes, merely to have the pleasure of seeing them turn round. It will conclude, from it's own disorder, that there is no such thing as order in Nature; from it's own immorality, that there is no morality. As it refers every thing to it's own reason, and seeing no reason for existence when it shall be no longer on the Earth, it thence concludes that in fact it shall not in that case exist. To be consistent, it ought equally to conclude on the same principle that it does not exist now; for it certainly can discover neither in itself nor in any thing around an actual reason for it's existence.

We are convinced of our existence by a power greatly superior to our mind, which is sentiment, or intellectual feeling. We are going to carry this natural instinct along with us into our researches respecting the existence of the DEITY, and the immortality of the soul; subjects on which our versatile reason has so frequently engaged, sometimes on this, sometimes on the other side of the question. Though our insufficiency be too great to admit of launching far into this unbounded career, we presume to hope that our perceptions, nay our very mistakes, may encourage men of genius to enter upon it. These sublime and eternal truths seem to us so deeply imprinted on the human heart, as to appear themselves the principles of our intellectual feeling, and to manifest themselves in our most ordinary affections, as in the wildest excesses of our passions.

OF THE SENTIMENT OF INNOCENCE.

The sentiment of innocence exalts us toward the DEITY, and prompts us to virtuous deeds. The Greeks and Romans employed little children to sing in their religious festivals, and to present their offerings at the altar, in the view of rendering the Gods propitious to their Country by the spectacle of infant innocence. The sight of infancy calls men back to the sentiments of Nature. When *Cato* of Utica had formed the resolution to put himself to death, his friends and servants concealed his sword; and upon his demanding it with expressions of violent indignation, they delivered it to him by the hand of a child: but the corruption of the age in which he lived had stifled in his heart the sentiment which innocence ought to have excited.

JESUS CHRIST recommends to us to become as little children: We call them innocents, *non nocentes*, because they have never injured any one. But notwithstanding the claims of their tender age, and the authority of the Christian Religion, To what barbarous education are they not abandoned?

Of Pity.

The sentiment of innocence is the native source of compassion; hence we are more deeply affected by the sufferings of a child than by those of an old man. The reason is not, as certain Philosophers pretend, because the resources and hopes of the child are inferior; for they are in truth greater than those of the old man, who is frequently infirm and hastening

ing to dissolution, whereas the child is entering into life; but the child has never offended; he is innocent. This sentiment extends even to animals, which in many cases excite our sympathy more than rational creatures do, from this very consideration, that they are harmless. This accounts for the idea of the good *La Fontaine*, in describing the Deluge, in his fable of *Baucis* and *Philemon*.

.....Tout disparut sur l'heure.
 Les vieillards déploroient ces sévères destins :
 Les animaux perir ! Car encor les humains,
 Tous avoient dû tomber sous les célestes armes,
 Baucis en répandit en secret quelques larmes.

All disappear'd in that tremendous hour.
 Age felt the weight of Heaven's insulted power ;
 On guilty Man the stroke with justice fell,
 But harmless brutes!—the fierceness who can tell
 Of wrath divine?—At thought of this, some tears
 Stole down the cheeks of *Baucis*.....

Thus the sentiment of innocence devlops, in the heart of Man, a divine character, which is that of generosity. It bears not on the calamity abstractedly considered, but on a moral quality, which it discerns in the unfortunate being who is the object of it. It derives increase from the view of innocence, and sometimes still more from that of repentance. Man alone of all animals is susceptible of it; and this not by a secret retrospect to himself, as some enemies of the Human Race have pretended; for were that the case, on stating a comparison between a child and an old man, both of them unfortunate, we ought to be more affected by the misery of the old man, considering

dering that we are removing from the wretchedness of childhood, and drawing nearer to that of old age : the contrary, however takes place, in virtue of the moral sentiment which I have alleged.

When an old man is virtuous, the moral sentiment of his distress is excited in us with redoubled force ; this is an evident proof that pity in Man is by no means an animal effect. The sight of a *Belisarius* is accordingly a most affecting object. If you heighten it by the introduction of a child holding out his little hand to receive the alms bestowed on that illustrious blind beggar, the impression of pity is still more powerful. But let me put a sentimental case. Suppose you had fallen in with *Belisarius* soliciting charity, on the one hand, and on the other, an orphan child blind and wretched, and that you had but one crown, without the possibility of dividing it, To whether of the two would you have given it ?

If on reflection you find that the eminent services rendered by *Belisarius* to his ungrateful Country, have inclined the balance of sentiment too decidedly in his favour, suppose the child overwhelmed with the woes of *Belisarius*, and at the same time possessing some of his virtues, such as having his eyes put out by his parents, and nevertheless continuing to beg alms for their relief ;* there would in my opi-

* The rector of a country village, in the vicinity of Paris, not far from Dravet, underwent in his infancy a piece of inhumanity not less barbarous, from the hands of his parents. He suffered castration from his own father, who was by profession a surgeon : he nevertheless supported that unnatural parent in his old age. I believe both father and son are still in life.

nion be no room for hesitation, provided a man felt only : for if you reason, the case is entirely altered ; the talents, the victories, the renown of the Grecian General, would presently absorb the calamities of an obscure child. Reason will recal you to the political interest, to the *I* human.

The sentiment of innocence is a ray of the Divinity. It invests the unfortunate person with a celestial radiance which falls on the human heart, and recoils, kindling it into generosity, that other flame of divine original. It alone renders us sensible to the distress of virtue, by representing it to us as incapable of doing harm ; for otherwise we might be induced to consider it as sufficient for itself. In this case it would excite rather admiration than pity.

Of the Love of Country.

This sentiment is, still farther, the source of love of Country, because it brings to our recollection the gentle and pure affections of our earlier years. It increases with extension, and expands with the progress of time, as a sentiment of a celestial and immortal nature. They have in Switzerland an ancient musical air, and extremely simple, called the *rans des vaches*. The music of this air produces an effect so powerful, that it was found necessary to prohibit the playing of it, in Holland and in France, before the Swiss soldiers, because it set them all a-deserting one after another. I imagine that the *rans des vaches* must imitate the lowing and bleating of the cattle, the repercussion of the echos, and other associations, which made the blood boil in the veins of those poor
soldiers,

soldiers, by recalling to their memory, the valleys, the lakes, the mountains of their Country,* and at the same time, the companions of their early life, their first loves, the recollection of their indulgent grandfathers, and the like.

The love of Country seems to strengthen in proportion as it is innocent and unhappy. For this reason Savages are fonder of their Country than polished Nations are ; and those who inhabit regions rough and wild, such as mountaineers, than those who live in fertile countries and fine climates. Never could the Court of Russia prevail upon a single Samoiède to leave the shores of the Frozen Ocean, and settle at Petersburg. Some Greenlanders were brought in the course of the last century to the Court of Copenhagen, where they were entertained with a profusion of kindness, but soon fretted themselves to death. Several of them were drowned in attempting to return to their country in an open boat. They

* I have been told that *Poutaveri*, the Indian of Otaheité, who was some years ago brought to Paris, on seeing, in the Royal Garden, the paper-mulberry-tree, the bark of which is in that island manufactured into cloth, the tear started to his eye, and clasping it in his arms, he exclaimed : *Ab ! tree of my country !* I could wish it were put to the trial, whether on presenting to a foreign bird, say a paroquet, a fruit of it's country, which it had not seen for a considerable time, it would express some extraordinary emotion. Though physical sensations attach us so strongly to Country, moral sentiments alone can give them a vehement intensity. Time, which blunts the former, gives only a keener edge to the latter. For this reason it is that veneration for a monument is always in proportion to it's antiquity, or to it's distance ; this explains that expression of *Tacitus* : *Major è longinquo reverentia* : distance increases reverence.

beheld all the magnificence of the Court of Denmark with extreme indifference ; but there was one in particular, whom they observed to weep every time he saw a woman with a child in her arms ; hence they conjectured that this unfortunate man was a father. The gentleness of domestic education, undoubtedly, thus powerfully attaches those poor people to the place of their birth. It was this which inspired the Greeks and Romans with so much courage in the defence of their Country. The sentiment of innocence strengthens the love of it, because it brings back all the affections of early life, pure, sacred, and incorruptible. *Virgil* was well acquainted with the effect of this sentiment, when he puts into the mouth of *Nisus*, who was dissuading *Euryalus* from undertaking a nocturnal expedition fraught with danger, those affecting words :

Te superesse velim : tua vitâ dignior ætas.

If thou survive me, I shall die content :

Thy tender age deserves the longer life.

But among Nations with whom infancy is rendered miserable, and is corrupted by irksome, ferocious, and unnatural education, there is no more love of Country than there is of innocence. This is one of the causes which sends so many Europeans a-rambling over the World, and which accounts for our having so few modern monuments in Europe, because the next generation never fails to destroy the monuments of that which preceded it. This is the reason that our books, our fashions, our customs, our ceremonies,

nies, and our languages, become obsolete so soon, and are entirely different this age from what they were in the last ; whereas all these particulars continue the same among the sedentary Nations of Asia, for a long series of ages together ; because children brought up in Asia, in the habitation of their parents, and treated with much gentleness, remain attached to the establishments of their ancestors out of gratitude to their memory, and to the places of their birth from the recollection of their happiness and innocence.

OF THE SENTIMENT OF ADMIRATION.

The sentiment of admiration transports us immediately into the bosom of DEITY. If it is excited in us by an object which inspires delight, we convey ourselves thither as to the source of joy ; if terror is roused, we flee thither for refuge. In either case, Admiration exclaims in these words, *Ah, my God !* This is, we are told, the effect of education merely, in the course of which frequent mention is made of the name of GOD ; but mention is still more frequently made of our father, of the king, of a protector, of a celebrated literary character. How comes it then that when we feel ourselves standing in need of support, in such unexpected concussions, we never exclaim, *Ah, my King !* or, if Science were concerned, *Ah, Newton !*

It is certain, that if the name of GOD be frequently mentioned to us in the progress of our education, the idea of it is quickly effaced in the usual train of the affairs of this World ; why then have we recourse to it
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in extraordinary emergencies? This sentiment of Nature is common to all Nations, many of whom give no theological instruction to their children. I have remarked it in the Negroes of the coast of Guinea, of Madagascar, of Cafrerie, and Mofambique, among the Tartars, and the Indians of the Malabar coast; in a word among men of every quarter of the World. I never saw a single one who, under the extraordinary emotions of surprize or of admiration, did not make, in his own language, the same exclamation which we do, and who did not lift up his hands and his eyes to Heaven.

Of the Marvellous.

The sentiment of admiration is the source of the instinct which men have in every age discovered for the marvellous. We are hunting after it continually, and every where, and we diffuse it principally over the commencement and the close of human life: hence it is that the cradles and the tombs of so great a part of Mankind have been enveloped in fiction. It is the perennial source of our curiosity; it discloses itself from early infancy, and is long the companion of innocence. Whence could children derive the taste for the marvellous? They must have Fairy-tales; and men must have epic poems and operas. It is the marvellous which constitutes one of the grand charms of the antique statues of Greece and Rome, representing heroes or gods, and which contributes more than is generally imagined to our delight, in the perusal of the ancient History of those Countries. It is one of the natural reasons which

may be produced to the President *Henault*, who expresses his astonishment that we should be more enamoured of ancient History than of modern, especially than that of our own country. The truth is, independently of the patriotic sentiments which serve at least as a pretext to the intrigues of the great men of Greece and Rome, and which were so entirely unknown to ours, that they frequently embroiled their country in maintaining the interests of a particular house, and sometimes in asserting the honour of precedence, or of sitting on a joint-stool; there is a marvellous in the religion of the Ancients which consoles and elevates human nature, whereas that of the Gauls terrifies and debases it. The gods of the Greeks and the Romans were patriots, like their great men. *Minerva* had given them the olive, *Neptune* the horse. Those deities protected the city and the people. But those of the ancient Gauls were tyrants, like their Barons; they afforded protection only to the Druids. They must be glutted with human sacrifices. In a word this religion was so inhuman, that two successive Roman Emperors, according to the testimony of *Suetonius* and *Pliny*, commanded it to be abolished. I say nothing of the modern interests of our History; but sure I am that the relations of our politics will never replace in it, to the heart of Man, those of the Divinity.

I must observe that as admiration is an involuntary movement of the soul toward Deity, and is of consequence sublime, several modern Authors have strained to multiply this kind of beauty in their productions, by an accumulation of surprising incidents; but

but Nature employs them sparingly in her's, because Man is incapable of frequently undergoing concussions so violent. She discloses to us by little and little the light of the Sun, the expansion of flowers, the formation of fruits. She gradually introduces our enjoyments by a long series of harmonies; she treats us as human beings; that is as machines feeble and easily deranged; she veils Deity from our view that we may be able to support his approach.

The Pleasure of Mystery.

This is the reason that mystery possesses so many charms. Pictures placed in the full glare of light, avenues in straight lines, roses fully blown, women in gaudy apparel, are far from being the objects which please us most. But shady valleys, paths winding about through the forests, flowers scarcely half-opened, and timid shepherdesses, excite in us the sweetest and the most lasting emotions. The loveliness and respectability of objects are increased by their mysteriousness. Sometimes it is that of antiquity, which renders so many monuments venerable in our eyes; sometimes it is that of distance, which diffuses so many charms over objects in the Horizon; sometimes it is that of names. Hence the Sciences which retain the Greek names, though they frequently denote only the most ordinary things, have a more imposing air of respect than those which have only modern names, though these may in many cases be more ingenious and more useful. Hence, for example, the construction of ships, and the art of navigation, are more lightly

prized by our modern *literati*, than several other physical sciences of the most frivolous nature, but which are dignified by Greek names. Admiration, accordingly, is not a relation of the understanding, or a perception of our reason, but a sentiment of the soul, which arises in us from a certain undescribable instinct of Deity, at sight of extraordinary objects, and from the very mysteriousness in which they are involved. This is so indubitably certain, that admiration is destroyed by the science which enlightens us. . If I exhibit to a savage an eolipile darting out a stream of inflamed spirit of wine, I throw him into an ecstasy of admiration; he feels himself disposed to fall down and worship the machine; he venerates me as the God of Fire, as long as he comprehends it not; but no sooner do I explain to him the nature of the process, than his admiration ceases and he looks upon me as a cheat.*

The Pleasures of Ignorance.

From an effect of these ineffable sentiments, and of those universal instincts of Deity, it is, that igno-

* For this reason it is that we admire only that which is uncommon. Were there to appear over the Horizon of Paris one of those parhelia which are so common at Spitzbergen, the whole inhabitants of the city would be in the streets to gaze at it, and wonder. It is nothing more however than a reflection of the Sun's disk in the clouds; and no one stands still to contemplate the Sun himself, because the Sun is an object too well known to be admired.

It is mystery which constitutes one of the charms of Religion. Those who insist upon a geometrical demonstration on this subject, betray a profound ignorance at once of the Laws of Nature, and of the demands of the human heart.

rance is become the inexhaustible source of delight to Man. We must take care not to confound, as all our Moralists do, ignorance and error. Ignorance is the work of Nature, and in many cases a blessing to Man; whereas error is frequently the fruit of our pretended human Sciences, and is always an evil. Let our political Writers say what they will, while they boast of our wonderful progress in knowledge, and oppose to it the barbarism of past ages, it was not ignorance which then set all Europe on fire, and inundated it with blood, in settling religious disputations. A race of ignorants would have kept themselves quiet. The mischief was done by persons who were under the power of error, who at that time vaunted as much perhaps of their superior illumination, as we now-a-days do of ours, and into each of whom the European spirit of education had instilled this error of early infancy, *Be the First*.

How many evils does ignorance conceal from us, which we are doomed one day to encounter in the course of human life, beyond the possibility of escaping! the inconstancy of friends, the revolutions of fortune, calumnies, and the hour of death itself so tremendous to most men. The knowledge of ills like these would mar all the comfort of living. How many blessings does ignorance render sublime! the illusions of friendship, and those of love, the perspectives of hope, and the very treasures which Science unfolds. The Sciences inspire delight only when we enter upon the study of them, at the period when the mind, in a state of ignorance, plunges into the great career. It is the point of contact between light and

darkness which presents to the eye the most favourable state of vision : this is the harmonic point which excites our admiration, when we are beginning to see clearly ; but it lasts only a single instant. It vanishes together with ignorance. The elements of Geometry may have impassioned young minds, but never the aged, unless in the case of certain illustrious Mathematicians who were proceeding from discovery to discovery. Those sciences only, and those passions, which are subjected to doubt and chance, form enthusiasts at every age of life, such as chemistry, avarice, play, and love.

For one pleasure which Science bestows, and causes to perish in the bestowing, ignorance presents us with a thousand which flatter us infinitely more. You demonstrate to me that the Sun is a fixed globe, the attraction of which gives to the planets one half of their movements. Had they who believed it to be conducted round the world by *Apollo* an idea less sublime ? They imagined at least that the attention of a God pervaded the Earth, together with the rays of the Orb of Day. It is Science which has dragged down the chaste *Diana* from her nocturnal car : she has banished the Hamadryads from the antique forests, and the gentle Naiads from the fountains. Ignorance had invited the Gods to partake of it's joys and it's woes ; to Man's wedding, and to his grave : Science discerns nothing in either except the elements merely. She has abandoned Man to Man, and thrown him upon the Earth as into a desert. Ah ! whatever may be the names which she gives to the different kingdoms of Nature, celestial Spirits undoubtedly regulate their

their combinations so ingenious, so varied, and so uniform ; and Man, who could bestow nothing upon himself, is not the only being in the Universe who partakes of intelligence.

It is not to the illumination of Science that the DEITY communicates the most profound sentiment of his attributes, but to our ignorance. Night conveys to the mind a much grander idea of infinity than all the glare of day. In the day-time I see but one Sun ; during the night I discern thousands. Are those very stars so variously coloured really Suns ? Are those planets which revolve around ours actually inhabited as it is ? From whence came the planet Cybele,* discovered but yesterday by a German of the name of *Herschel* ? It has been running it's race from the beginning of the Creation, and was till of late unknown to us. Whither go those uncertainly revolving comets, traversing the regions of unbounded space ? Of what consists that milky way which divides the firmament of Heaven ? What are those two dark clouds placed toward the Antarctic Pole, near the Cross of the South ? Can there be stars which diffuse darkness, conformably to the belief of the Ancients ? Are there places in the firmament which the light never reaches ? The Sun discovers to me only a terrestrial infinity, and the night discloses an infinity altogether celestial. O, mysterious ignorance, draw thy hallowed curtains over those enchanting spectacles ! Permit not human Science to apply to them it's cheerless compasses, Let not virtue be re-

* The English, in compliment to their Sovereign *George III.* give it the name of *Georgium Sidus*.

duced henceforth to look for her reward from the justice and the sensibility of a Globe ! Permit her to think that there are, in the Universe, destinies far different from those which fill up the measure of wo upon this Earth.

Science is continually shewing us the boundary of our reason, and ignorance is for ever removing it. I take care in my solitary rambles not to ask information respecting the name and quality of the person who owns the castle which I perceive at a distance. The history of the master frequently disfigures that of the landscape. It is not so with the History of Nature ; the more her Works are studied the more is our admiration excited. There is one case only in which the knowledge of the works of men is agreeable to us, it is when the monument which we contemplate has been the abode of goodness. What little spire is that which I perceive at Montmorency ? It is that of Saint-Gratian, where *Catinal* lived the life of a sage, and under which his ashes are laid to rest. My soul, circumscribed within the precincts of a small village, takes it's flight, and ranges over the capacious sphere of the age of *Louis XIV.* and hastens thence to expatiate through a sphere more sublime than that of the World, the sphere of virtue. When I am incapable of procuring for myself such perspectives as these, ignorance of places answers my purpose much better than the knowledge of them could do. I have no occasion to be informed that such a forest belongs to an Abbey or to a Dutchy, in order to feel how majestic it is. It's ancient trees, it's profound glades, it's solemn, silent solitudes, are sufficient for me.

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The moment I cease to behold Man there, that moment I feel a present Deity. Let me give ever so little scope to my sentiment, there is no landscape but what I am able to ennoble. These vast meadows are metamorphosed into Oceans; these mist-clad hills are islands emerging above the Horizon; that city below is a city of Greece, dignified by the residence of *Socrates* and of *Xenophon*. Thanks to my ignorance I can give the reins to the instinct of my soul. I plunge into infinity. I prolong the distance of places by that of ages; and to complete the illusion, I make that enchanted spot the habitation of virtue.

OF THE SENTIMENT OF MELANCHOLY.

So beneficent is Nature that she converts all her phenomena into so many sources of pleasure to Man; and if we pay attention to her procedure, it will be found that her most common appearances are the most agreeable.

I enjoy pleasure, for example, when the rain descends in torrents, when I see the old mossy walls dripping, and when I hear the whistling of the wind, mingled with the clattering of the rain. These melancholy sounds, in the night-time, throw me into a soft and profound sleep. Neither am I the only person susceptible of such affections. *Pliny* tells us of a Roman Consul, who when it rained had his couch spread under the thick foliage of a tree, in order to hear the drops clatter as they fell, and to be lulled to sleep by the murmuring noise.

I cannot tell to what physical law Philosophers may refer

refer the sensations of melancholy. For my own part I consider them as the most voluptuous affections of the soul. Melancholy, says *Michael Montaigne*, is dainty. It proceeds, if I am not mistaken, from it's gratifying at once the two powers of which we are formed, the body and the soul ; the sentiment of our misery, and that of our excellence.

Thus, for example, in bad weather, the sentiment of my human misery is tranquillized by seeing it rain, while I am under cover ; by hearing the wind blow violently while I am comfortably in bed. I, in this case, enjoy a negative felicity. With this are afterwards blended some of those attributes of the Divinity, the perceptions of which communicate such exquisite pleasure to the soul ; such as infinity of extension, from the distant murmuring of the wind. This sentiment may be heightened from reflection on the Laws of Nature, suggesting to me that this rain, which comes, for the sake of supposition, from the West, has been raised out of the bosom of the Ocean, and perhaps from the coasts of America ; that it has been sent to sweep our great cities into cleanliness ; to replenish the reservoirs of our fountains ; to render our rivers navigable ; and whilst the clouds which pour it down are advancing eastward, to convey fertility even to the vegetables of Tartary, the grains and the garbage which it carries down our rivers, are hurling away westward, to precipitate themselves into the Sea to feed the fishes of the Atlantic Ocean. These excursions of my understanding convey to the soul an extension corresponding to it's nature,

ture, and appear to me so much the more pleasing, that the body, which for it's part loves repose, is more tranquil and more completely protected.

If I am in a sorrowful mood, and not disposed to send my soul on an excursion so extensive, I still feel much pleasure in giving way to the melancholy which the bad weather inspires. It looks as if Nature were then conforming to my situation, like a sympathizing friend. She is besides at all times so interesting, under whatever aspect she exhibits herself, that when it rains I think I see a beautiful woman in tears. She seems to me more beautiful the more that she wears the appearance of affliction. In order to be impressed with these sentiments, which I venture to call voluptuous, I must have no project in hand of a pleasant walk, of visiting, of hunting, of journeying, which in such circumstances would put me into bad humour, from being contradicted. Much less ought our two component powers to cross, or clash against each other, that is, to let the sentiment of infinity bear upon our misery, by thinking that this rain will never have an end ; and that of our misery to dwell on the phenomena of Nature, by complaining that the seasons are quite deranged, that order no longer reigns in the elements, and thus giving into all the pceivish, inconclusive reasonings, adopted by a man who is wet to the skin. In order to the enjoyment of bad weather, our soul must be travelling abroad, and the body at rest.

From the harmony of those two powers of our constitution it is, that the most terrible revolutions of Nature frequently interest us more than her gayest scenery. The volcano near Naples attracts more
travellers

travellers to that city than the delicious gardens which adorn her shores ; the plains of Greece and Italy, overspread with ruins, allure more than the richly cultivated lawns of England ; the picture of a tempest, more connoisseurs than that of a calm ; and the fall of a tower, more spectators than it's construction.

The Pleasure of Ruin.

I was for some time impressed with the belief that Man had a certain unaccountable taste for destruction. If the populace can lay their hands upon a monument they are sure to destroy it. I have seen at Dresden, in the gardens of the Count *de Bruhl*, beautiful statues of females, which the Prussian soldiery had amused themselves with mutilating by musket-shot when they got possession of that city. Most of the common people have a turn for slander ; they take pleasure in levelling the reputation of all that is exalted. But this malevolent instinct is not the production of Nature. It is infused by the misery of the individuals, whom education inspires with an ambition which is interdicted by Society, and which throws them into a negative ambition. Incapable of raising any thing, they are impelled to lay every thing low. The taste for ruin in this case is not natural, and is simply the exercise of the power of the miserable. Man in a savage state destroys the monuments only of his enemies ; he preserves with the most assiduous care those of his own Nation ; and what proves him to be naturally much better than Man in a state of Society, he never slanders his compatriots.

Be

Be it as it may, the passive taste for ruin is universal. Our voluptuaries embellish their gardens with artificial ruins; savages take delight in a melancholy repose by the brink of the Sea, especially during a storm, or in the vicinity of a cascade surrounded by rocks. Magnificent destruction presents new picturesque effects; and it was the curiosity of seeing this produced, combined with cruelty, which impelled *Nero* to set Rome on fire, that he might enjoy the spectacle of a vast conflagration. The sentiment of humanity out of the question, those long streams of flame which, in the middle of the night, lick the Heavens, to make use of *Virgil's* expression, those torrents of red and black smoke, those clouds of sparks of all colours, those scarlet reverberations in the streets, on the summit of towers, along the surface of the waters, and on the distant mountains, give us pleasure even in pictures and in descriptions.

This kind of affection, which is by no means connected with our physical wants, has induced certain Philosophers to allege, that our soul, being in a state of agitation, took pleasure in all extraordinary emotions. This is the reason, say they, that such crowds assemble in the Place de Grève to see the execution of criminals. In spectacles of this sort, there is in fact no picturesque effect whatever. But they have advanced their axiom as slightly as so many others with which their Works abound. First, our soul takes pleasure in rest as much as in commotion. It is a harmony very gentle, and very easily disturbed by violent emotions; and granting it to be in its own nature a movement, I do not see that it ought to

to take pleasure in those which threaten it with destruction. *Lucretius* has, in my opinion, come much nearer to the truth, when he says that tastes of this sort arise from the sentiment of our own security, which is heightened by the sight of danger to which we are not exposed. It is a pleasant thing, says he, to contemplate a storm from the shore. It is undoubtedly from this reference to self, that the common people take delight in relating by the fire-side, collected in a family way during the Winter evenings, frightful stories of ghosts, of men losing themselves by night in the woods, of highway robberies. From the same sentiment likewise it is, that the better sort take pleasure in the representation of tragedies, and in reading the description of battles, of shipwrecks, and of the crash of empire. The security of the snug tradesman is increased by the danger to which the foldier, the mariner, the courtier is exposed. Pleasure of this kind arises from the sentiment of our misery, which is as has been said one of the instincts of our melancholy.

But there is in us besides a sentiment more sublime, which derives pleasure from ruin independently of all picturesque effect, and of every idea of personal security; it is that of Deity, which ever blends itself with our melancholy affections, and which constitutes their principal charm. I shall attempt to unfold some of the characters of it, following the impressions made upon us by ruins of different kinds. The subject is both rich and new; but I possess neither leisure nor ability to bestow upon it a profound investigation. I shall however drop a few words upon it by the way,
in

in the view of exculpating and of exalting human nature with what ability I have.

The heart of man is so naturally disposed to benevolence, that the spectacle of a ruin which brings to our recollection only the misery of our fellow men, inspires us with horror, whatever may be the picturesque effect which it presents. I happened to be at Dresden in the year 1765, that is several years after it had been bombarded. That small but very beautiful and commercial city, more than half composed of little palaces charmingly arranged, the fronts of which were adorned externally with paintings, colonades, balconies, and pieces of sculpture, at that time presented a pile of ruins. A considerable part of the enemy's bombs had been directed against the Lutheran church, called St. Peter's, built in form of a rotundo, and arched over with so much solidity that a great number of those bombs struck the cupola, without being able to injure it, but rebounded on the adjoining palaces, which they set on fire and partly consumed. Matters were still in the same state as at the conclusion of the war, at the time of my arrival. They had only piled up along some of the streets, the stones which encumbered them; so that they formed on each side long parapets of blackened stone. You might see halves of palaces standing, laid open from the roof down to the cellars. It was easy to distinguish in them the extremity of stair-cases, painted ceilings, little closets lined with Chinese paper, fragments of mirrors, of marble chimneys, of smoked gildings. Of others nothing remained except massy stacks of chimneys rising amidst the

rubbish, like long black and white pyramids. More than a third part of the city was reduced to this deplorable condition. You saw the inhabitants moving backward and forward with a settled gloom on their faces, formerly so gay that they were called the Frenchmen of Germany. Those ruins, which exhibited a multitude of accidents singularly remarkable, from their forms, their colours, and their grouping, threw the mind into a deep melancholy; for you saw nothing in them but the traces of the wrath of a King, who had not levelled his vengeance against the ponderous ramparts of a warlike city, but against the pleasant dwellings of an industrious people. I observed even more than one Prussian deeply affected at the sight. I by no means felt, though a stranger, that reflection of self-security which arises in us on seeing a danger against which we are sheltered; but on the contrary a voice of affliction thrilled through my heart, saying to me, *If this were thy Country!*

It is not so with ruins which are the effect of time. These give pleasure by launching us into infinity; they carry us several ages back, and interest us in proportion to their antiquity. This is the reason that the ruins of Italy affect us more than those of our own country; the ruins of Greece more than those of Italy; and the ruins of Egypt more than those of Greece. The first antique monument which I had ever seen was in the vicinity of *Orange*. It is a triumphal arch which *Marins* caused to be erected to commemorate his victory over the *Cimbri*. It stands at a small distance from the city in the midst of fields. It is an oblong mass, consisting of three arcades, somewhat

what resembling the gate of St. Denis. On getting near I became all eyes to gaze at it. What! exclaimed I, a work of the ancient Romans! And imagination instantly hurried me away to Rome, and to the age of *Marius*. It would not be easy for me to describe all the successive emotions which were excited in my breast. In the first place, this monument, though erected over the sufferings of Mankind, as all the triumphal arches in Europe are, gave me no pain; for I recollected that the Cimbri had come to invade Italy, like bands of Robbers. I remarked, that if this triumphal arch was a memorial of the victories of the Romans over the Cimbri, it was likewise a monument of the triumph of Time over the Romans. I could distinguish upon it, in the bas-relief of the frieze, which represents a battle, an ensign containing these characters clearly legible, S. P. Q. R. *Senatus Populus-Que Romanus*; and another inscribed with M. O..... the meaning of which I could not make out. As to the warriors, they are so completely effaced that neither their arms nor their features are distinguishable. Even the limbs of some of them are worn out. The mass of this monument is, in other respects, in excellent preservation, excepting one of the square pillars that support the arch, which a vicar in the neighbourhood had demolished to repair his parsonage-house. This modern ruin suggested another train of reflection, respecting the exquisite skill of the Ancients in the construction of their public monuments; for, though the pillar which supported one of the arches on one side, had been demolished, as I have mentioned, nevertheless that part

of the arch which rested upon it hung unsupported in the air, as if the pieces of the vaulting had been glued to each other. Another idea likewise struck me, namely, that the demolishing parson might perhaps have been a descendant from the ancient Cimbri, as we modern French trace up our descent to the ancient Nations of the North which invaded Italy. Thus, the demolition excepted, of which I by no means approve, from the respect I bear to antiquity, I mused upon the vicissitudes of all human affairs, which put the victors in the place of the vanquished, and the vanquished in that of the victors. I settled the matter thus therefore in my own mind, that as *Marius* had avenged the honour of the Romans, and levelled the glory of the Cimbri, one of the descendants of the Cimbri had, in his turn, levelled that of *Marius*; while the young people of the vicinity, who might come perhaps on their days of festivity to dance under the shade of this triumphal arch, spent not a single thought about either the person who constructed, or the person who demolished it.

The ruins in which Nature combats with human Art inspire a gentle melancholy. In these she discovers to us the vanity of our labours, and the perpetuity of her own. As she is always building up, even when she destroys, she calls forth from the clefts of our monuments the yellow gillyflower, the chenopodium, grasses of various sorts, wild cherry-trees, garlands of bramble, stripes of moss, and all the saxatile plants, which by their flowers and their attitudes form the most agreeable contrasts with the rocks.

I used to stop formerly with a high degree of pleasure

ture in the garden of the Luxembourg, at the extremity of the alley of the Carmelites, to contemplate a piece of architecture which stands there, and which had been originally intended to form a fountain. On one side of the pediment which crowns it is stretched along an ancient River-god, on whose face time has imprinted wrinkles inexpressibly more venerable than those which had been traced by the chisel of the Sculptor: it has made one of the thighs to drop off, and has planted a maple tree in its place. Of the Naiad who was opposite, on the other side of the pediment, nought remains except the lower part of the body. The head, the shoulders, the arms, have all disappeared. The hands are still supporting an urn, out of which issues, instead of fluviatic plants, some of those which thrive in the driest situations, tufts of yellow gillyflowers, dandelions, and long sheaves of saxatile grasses.

A fine style of Architecture always produces beautiful ruins. The plans of Art, in this case, form an alliance with the majesty of those of Nature. I know no object which presents a more imposing aspect than the antique and well-constructed towers which our Ancestors reared on the summit of mountains, to discover their enemies from afar, and out of the coping of which now shoot out tall trees, with their tops waving majestically in the wind. I have seen others, the parapets and battlements of which, murderous in former times, were embellished with the lilach in flower, whose shades, of a bright and tender violet hue, formed enchanting oppositions

with the cavernous and embrowned stone-work of the tower.

The interest of a ruin is greatly heightened when some moral sentiment is blended with it; for example, when those degraded towers are considered as having been formerly the residence of rapine. Such has been, in the *Pais de Caux*, an ancient fortification called the castle of *Lillebonne*. The lofty walls which form its precinct are ruinous at the angles, and so overgrown with ivy that there are very few spots where the layers of the stones are perceptible. From the middle of the courts, into which I believe it must have been no easy matter to penetrate, arise lofty towers with battlements, out of the summit of which spring up great trees, appearing in the air like a head-dress of thick and bushy locks. You perceive here and there through the mantling of the ivy which clothes the sides of the castle, Gothic windows, embrasures, and breaches which give a glimpse of stair-cases, and resemble the entrance into a cavern. No bird is seen flying around this habitation of desolation, except the buzzard hovering over it in silence; and if the voice of any of the feathered race makes itself sometimes heard there, it is that of some solitary owl which has retired thither to build her nest. This castle is situated on a rising ground, in the middle of a narrow valley formed by mountains crowned with forests. When I recollect, at sight of this mansion, that it was formerly the residence of petty tyrants, who, before the royal authority was sufficiently established over the kingdom, from thence
exercised

exercised their self-created right of pillage over their miserable vassals, and even over inoffensive passengers who fell into their hands, I imagine to myself that I am contemplating the carcase, or the skeleton, of some huge, ferocious beast of prey.

The Pleasure of Tombs.

But there are no monuments more interesting than the tombs of men, and especially those of our own ancestors. It is remarkable that every Nation, in a state of Nature, and even the greatest part of those which are civilized, have made the tombs of their forefathers the centre of their devotions, and an essential part of their religion. From these however must be excepted the people whose fathers rendered themselves odious to their children by a gloomy and severe education, I mean the western and southern Nations of Europe. This religious melancholy is diffused every where else. The tombs of progenitors are all over China among the principal embellishments of the suburbs of their cities, and of the hills in the country. They form the most powerful bonds of patriotic affection among savage Nations. When the Europeans have sometimes proposed to these a change of territory, this was their reply: "Shall we say to the bones of our Fathers, Arise, and accompany us to a foreign land?" They always considered this objection as insurmountable.

Tombs have furnished to the poetical talents of *Young* and *Gesner*, imagery the most enchanting. Our voluptuaries, who sometimes recur to the senti-

ments of Nature, have factitious monuments erected in their gardens. These are not it must be confessed the tombs of their parents. But whence could they have derived this sentiment of funeral melancholy, in the very midst of pleasure? Must it not have been from the persuasion that something still subsists after we are gone? Did a tomb suggest to their imagination only the idea of what it is designed to contain, that is of a corpse merely, the sight of it would shock rather than please them. How afraid are most of them at the thought of death! To this physical idea then some moral sentiment must undoubtedly be united. The voluptuous melancholy resulting from it arises, like every other attractive sensation, from the harmony of the two opposite principles; from the sentiment of our fleeting existence, and that of our immortality; which unite on beholding the last habitation of Mankind. A tomb is a monument erected on the confines of the two Worlds.

It first presents to us the end of the vain disquietudes of life, and the image of everlasting repose: it afterwards awakens in us the confused sentiment of a blessed immortality, the probabilities of which grow stronger and stronger in proportion as the person whose memory is recalled was a virtuous character. It is there that our veneration fixes. And this is so unquestionably true, that though there be no difference between the dust of *Nero* and that of *Socrates*, no one would grant a place in his grove to the remains of the Roman Emperor, were they deposited even in a silver urn; whereas every one would exhibit

bit those of the Philosopher in the most honourable place of his best apartment, were they contained in only a vase of clay.

It is from this intellectual instinct therefore in favour of virtue, that the tombs of great men inspire us with a veneration so affecting. From the same sentiment too it is, that those which contain objects that have been lovely excite so much pleasing regret ; for, as we shall make appear presently, the attractions of love arise entirely out of the appearances of virtue. Hence it is that we are moved at the sight of a little hillock which covers the ashes of an amiable infant, from the recollection of it's innocence : hence again it is, that we are melted into tenderness on contemplating the tomb in which is laid to repose a young female, the delight and the hope of her family by reason of her virtues. In order to render such monuments interesting and respectable there is no need of bronzes, marbles, and gildings. The more simple that they are the more energy they communicate to the sentiment of melancholy. They produce a more powerful effect when poor rather than rich, antique rather than modern, with details of misfortune rather than with titles of honour, with the attributes of virtue rather than with those of power. It is in the country principally that their impression makes itself felt in a very lively manner. A simple, unornamented grave there, causes more tears to flow than the gaudy splendor of a cathedral interment.* There it is that
grief

* Our Artists set statues of marble a-weeping round the tombs of the Great. It is very proper to make statues weep where men
shed

grief assumes sublimity; it ascends with the aged yews in the church-yard; it extends with the surrounding hills and plains; it allies itself with all the effects of Nature, with the dawning of the morning, with the murmuring of the winds, with the setting of the Sun, and with the darkness of the night.

Labour the most oppressive, and humiliation the most degrading, are incapable of extinguishing the impression of this sentiment in the breasts of even the most miserable of Mankind. “During the space “of two years,” says Father *du Tertre*, “our negro “*Dominick*, after the death of his wife, never failed

shed no tears. I have been many a time present at the funeral obsequies of the rich; but rarely have I seen any one shedding a tear on such occasions, unless it were, now and then, an aged domestic, who was perhaps left destitute. Some time ago happening to pass through a little-frequented street of the Fauxbourg Saint-Marceau, I perceived a coffin at the door of a house of but mean appearance. Close by the coffin was a woman on her knees in earnest prayer to God, and who had all the appearance of being absorbed in grief. This poor woman having caught with her eye, at the farther end of the street, the priests and their attendants coming to carry off the body, got upon her feet and run off, putting her hands upon her eyes, and crying bitterly. The neighbours endeavoured to stop her and to administer some consolation; but all to no purpose. As she passed close by me, I took the liberty to ask if it were the loss of a mother or of a daughter that she lamented so piteously. “Alas! Sir,” said she to me, the tears gushing down her cheeks, “I am mourning the loss of a good “lady who procured me the means of earning my poor livelihood; she kept me employed from day to day.” I informed myself in the neighbourhood respecting the condition of this beneficent lady: she was the wife of a petty joiner. Ye people of wealth, What use then do you make of riches, during your lifetime, seeing no tears are shed over your grave!

“for

“ for a single day, as soon as he returned from the
 “ place of his employment, to take the little boy and
 “ girl which he had by her, and to conduct them to
 “ the grave of the deceased, over which he sobbed
 “ and wept before them for more than half an hour
 “ together, while the poor children frequently caught
 “ the infection of his sorrow.” * What a funeral
 oration for a wife and a mother ! This man however
 was nothing but a wretched slave.

There farther results, from the view of ruins; another sentiment independent of all reflection : it is that of heroism. Great Generals have oftener than once employed their sublime effect in order to exalt the courage of their soldiers. *Alexander* persuaded his army, loaded with the spoils of Persia, to burn their baggage ; and the moment that the fire was applied, they are on tiptoe to follow him all over the World. *William*, Duke of Normandy, as soon as he had landed his troops on England, set fire to his own ships, and the conquest of the kingdom was effected.

But there are no ruins which excite in us sentiments so sublime as those which the ruins of Nature produce. They represent to us this vast prison of the Earth in which we are immured, subject itself to destruction ; and they detach us at once from our passions and prejudices, as from a momentary and frivolous theatrical exhibition. When Lisbon was destroyed by an earthquake, its inhabitants on making their escape from their houses embraced each other ; high and low, friends and enemies, Jews and Inqui-

* History of the Antilles : Tom. viii. chap. 1. sect. 4.

sitors, known and unknown ; every one shared his clothing and provisions with those who had saved nothing. I have seen something similar to this take place on board a ship, on the point of perishing in a storm. The first effect of calamity, says a celebrated Writer, is to strengthen the soul, and the second is to melt it down. It is because the first emotion in Man, under the pressure of calamity, is to rise up toward the DEITY ; and the second, to fall back into physical wants. This last effect is that of reflection ; but the moral and sublime sentiment, almost always, takes possession of the heart at sight of a magnificent destruction.

Ruins of Nature.

When the predictions of the approaching dissolution of the World spread over Europe, some ages ago, a very great number of persons divested themselves of their property ; and there is no reason to doubt that the very same thing would happen at this day, should similar opinions be propagated with effect. But such sudden and total ruins are not to be apprehended in the infinitely sage plans of Nature ; under them nothing is destroyed but what is by them repaired.

The apparent ruins of the Globe, such as the rocks which roughen its surface in so many places, have their utility. Rocks have the appearance of ruins in our eyes only because they are neither square nor polished, like the stones of our monuments ; but their anfractuosities are necessary to the vegetables and animals which are destined to find in them nourishment

ment and shelter. It is only for beings vegetative and sensitive that Nature has created the fossil kingdom ; and as soon as Man raises useless masses out of it to these objects on the surface of the Earth, she hastens to apply her chisel to them, in order to employ them in the general harmony.

If we attend to the origin and the end of her Works, those of the most renowned Nations will appear perfectly frivolous. It was not necessary that mighty Potentates should rear such enormous masses of stone, in order one day to inspire me with respect from their antiquity. A little flinty pebble in one of our brooks is more ancient than the pyramids of Egypt. A multitude of cities have been destroyed since it was created. If I feel myself disposed to blend some moral sentiment with the monuments of Nature, I can say to myself, on seeing a rock : “ It was on this place perhaps that the good *Fenelon* “ reposed, while meditating the plan of his divine “ *Telemachus* ; perhaps the day will come when there “ shall be engraved on it, that he had produced a “ revolution in Europe, by instructing Kings that “ their glory consisted in rendering Mankind happy ; “ and that the happiness of Mankind depends on “ the labours of agriculture : Posterity will gaze with “ delight on the very stone on which my eyes are at “ this moment fixed.” It is thus that I embrace at once the past and the future, at sight of an insensible rock, and which, in consecrating it to virtue, by a simple inscription, I render infinitely more venerable than by decorating it with the five orders of Architecture.

Of the Pleasure of Solitude.

Once more, it is melancholy which renders solitude so attractive. Solitude flatters our animal instinct by inviting us to a retreat so much more tranquil as the agitations of our life have been more restless; and it extends our divine instinct, by opening to us perspectives in which natural and moral beauties present themselves with all the attraction of sentiment. From the effect of these contrasts, and of this double harmony, it comes to pass, that there is no solitude more soothing than that which is adjoining to a great city; and no popular festivity more agreeable than that which is enjoyed in the bosom of a solitude.

OF THE SENTIMENT OF LOVE.

Were love nothing superior to a physical sensation, I would wish for nothing more than to leave two lovers to reason and to act, conformably to the physical laws of the motion of the blood, of the filtration of the chyle, and of the other humours of the body, were it my object to give the grossest libertine a disgust for it. Its principal act itself is accompanied with the sentiment of shame, in the men of all countries. No Nation permits public prostitution; and though enlightened Navigators may have advanced that the inhabitants of Otaheité conformed to this infamous practice, observers more attentive have since adduced proof that, as to the island in question it was chargeable only on young women in the lowest rank of Society, but that the other classes there preserved the sense of modesty common to all Mankind.

I am

I am incapable of discovering in Nature any direct cause of shame. If it be alledged that Man is ashamed of the venereal act because it renders him similar to the animal, the reason will be found insufficient ; for sleep, drinking, and eating, bring him still more frequently to the similitude of the animal, and yet no shame attaches to these. There is in truth a cause of shame in the physical act : but whence proceeds that which occasions the moral sentiment of it ? Not only is the act carefully kept out of sight, but even the recollection of it. Woman considers it as a proof of her weakness : she opposes long resistance to the solicitations of Man. How comes it that Nature has planted this obstacle in her heart, which in many cases actually triumphs over the most powerful of propensities, and the most headstrong of passions ?

Independently of the particular causes of shame, which are unknown to me, I think I discern one in the two powers of which Man is constituted. The sense of love being, if I may so express myself, the centre toward which all the physical sensations converge, as those of perfumes, of music, of agreeable colours and forms, of the touch, of delicate temperatures and flavours ; there results from these a very powerful opposition to that other intellectual power from which are derived the sentiments of divinity and immortality. Their contrast is so much the more collusive, that the act of the first is in itself animal and blind, and that the moral sentiment which usually accompanies love, is more expansive and more sublime. The lover accordingly, in order to render his mistress propitious, never fails to make this take
the

the lead, and to employ every effort to amalgamate it with the other sensation. Thus shame arises, in my opinion, from the combat of these two powers; and this is the reason that children naturally have it not, because the sense of love is not yet unfolded in them; that young persons have a great deal of it, because those two powers are acting in them with all their energy; and that most old people have none at all, because they are past the sense of love from a decay of Nature in them, or have lost it's moral sentiment from the corruption of Society; or, which is a common case, from the effect of both together, by the concurrence of these two causes.

As Nature has assigned to the province of this passion, which is designed to be the means of re-perpetuating human life, all the animal sensations, she has likewise united in it all the sentiments of the soul; so that love presents to two lovers not only the sentiments which blend with our wants, and with the instinct of our misery, such as those of protection, of assistance, of confidence, of support, of repose, but all the sublime instincts besides which elevate Man above humanity. In this sense it is that *Plato* defined love to be, an interposition of the Gods in behalf of young people.*

Whoever

* It was by means of the sublime influence of this passion that the Thebans formed a battalion of heroes, called the sacred band: they all fell together in the battle of Cheronca. They were found extended on the ground, all in the same straight line, transfixed with ghastly wounds before, and with their faces turned toward the enemy. This spectacle drew tears from the eyes of *Philip* himself, their conqueror. *Lycurgus* had likewise employed the power

Whoever would wish to be acquainted with human nature has only to study that of love; he would perceive springing out of it all the sentiments of which
I have

power of love in the education of the Spartans, and rendered it one of the great props of his republic. But as the animal counterpoise of this celestial sentiment was no longer found in the beloved object, it sometimes threw the Greeks into certain irregularities, which have justly been imputed to them as matter of reproach. Their Legislators considered women as the instruments merely of procreating children; they did not perceive that by favouring love between men, they enfeebled that which ought to unite the sexes, and that in attempting to strengthen their political bands, they were bursting asunder those of Nature.

The Republic of *Lycurgus* had besides other natural defects; I mention only one, the slavery of the Helots. These two particulars however excepted, I consider him as the most sublime genius that ever existed: and even as to these he stands in some measure excusable, in consideration of the obstacles of every kind which he had to encounter in the establishment of his Laws.

There are in the harmonies of the different ages of human life relations so delightful, of the weakness of children to the vigour of their parents, of the courage and the love between young persons of the two sexes to the virtue and the religion of unimpassioned old people, that I am astonished no attempt has been made to present a picture, at least, of a human society thus in concord with all the wants of life, and with the Laws of Nature. There are it is true some sketches of this sort in the *Telemachus*, among others, in the manners of the inhabitants of Bœtica; but they are indicated merely. I am persuaded that such a Society, thus cemented in all it's parts, would attain the highest degree of social felicity of which human nature is susceptible in this World, and would be able to bid defiance to all the storms of political agitation. So far from being exposed to the fear of danger on the part of neighbouring States, it might make an easy conquest of them without the use of arms, as ancient China did, simply by the spectacle of it's felicity, and by the influence of it's virtues. I once entertained a design, on the suggestion of *J. J. Rousseau*, of
VOL. II, C c extending

I have spoken, and a multitude of others which I have neither time nor talents to unfold. We shall remark, first, that this natural affection discloses, in every being, it's principal character, by giving it all the advantage of a complete extension. Thus, for example, it is in the season when each plant re-perpetuates itself by it's flowers and it's fruit that it acquires all it's perfection, and the characters which invariably determine it. It is in the season of loves that the birds of song redouble their melody, and that those which excel in the beauty of their colouring array themselves in their finest plumage, the various shades of which they delight to display, by swelling their throats, by rounding their tail into the form of a wheel, or by extending their wings along the ground. It is then that the lusty bull presents his forehead, and threatens with the horn; that the nimble courser frisks along the plain; that the ferocious animals fill the forests with the dreadful noise of their roaring, and that the tigress, exhaling the odour of carnage, makes the solitudes of Africa to resound with her hideous yells, and appears clothed with every horrid, attractive grace, in the eyes of her tremendous lover.

It is likewise in the season of loving, that all the affections natural to the heart of Man, unfold themselves. Then it is that innocence, candour, sincer-

extending this idea, by composing the History of a Nation of Greece, well known to the Poets, because it lived conformably to Nature, and for that very reason almost altogether unknown to our political Writers; but time permitted me only to trace the outline of it, or at most to finish the first Book.

urity,

rity, modesty, generosity, heroism, holy faith, piety, express themselves with grace ineffable in the attitude and features of two young lovers. Love assumes in their souls all the characters of religion and virtue. They betake themselves to flight, far from the tumultuous assemblies of the city, and from the corruptive paths of ambition, in quest of some sequestered spot, where upon the rural altar they may be at liberty to mingle and exchange the tender vows of everlasting affection. The fountains, the woods, the dawning *Aurora*, the constellations of the night, receive by turns the sacred deposit of the oath of Love. Lost at times in a religious intoxication, they consider each other as beings of a superior order. The mistress is a goddess, the lover becomes an idolater. The grass under their feet, the air which they breathe, the shades under which they repose, all, all appear consecrated in their eyes from filling the same atmosphere with them. In the widely extended Universe they behold no other felicity but that of living and dying together, or rather they have lost all sight of death. Love transports them into ages of infinite duration, and death seems to them only the transition to eternal union.

But should cruel destiny separate them from each other, neither the prospects of fortune, nor the friendship of companions the most endeared, can afford consolation under the loss. They had reached Heaven, they languish on the earth, they are hurried in their despair into the retirement of the cloister, to employ the remaining dregs of life in re-demanding of God the felicity of which they enjoyed but one

transient glimpse. Nay many an irksome year after their separation, when the cold hand of age has frozen up the current of sense ; after having been distracted by a thousand and a thousand anxieties foreign to the heart, which so many times made them forget that they were human, the bosom still palpitates at sight of the tomb which contains the object once so tenderly beloved. They had parted with it in the World, they hope to see it again in Heaven. Unfortunate *Heloisa* ! what sublime emotions were kindled in thy soul by the ashes of thy *Abelard* ?

Such celestial emotions cannot possibly be the effects of a mere animal act. Love is not a slight convulsion, as the divine *Marcus-Aurelius* calls it. It is to the charms of virtue, and to the sentiment of her divine attributes, that love is indebted for all that enthusiastic energy. Vice itself, in order to please, is under the necessity of borrowing it's looks and it's language. If theatrical female performers captivate so many lovers, the seduction is carried on by means of the illusions of innocence, of benevolence, and of magnanimity, displayed in the characters of the shepherdesses, of the heroines, and of the goddesses, which they are accustomed to represent. Their boasted graces are only the appearances of the virtues which they counterfeit. If sometimes, on the contrary, virtue becomes displeasing, it is because she exhibits herself in the disguise of harshness, caprice, peevishness, or some other repulsive bad quality.

Thus beauty is the offspring of virtue, and ugliness that of vice ; and these characters frequently impress themselves from the earliest infancy by means of education.

education. It will be objected to me that there are men handsome yet vicious, and others homely yet virtuous. *Socrates* and *Alcibiades* have been adduced as noted instances in ancient times. But these very examples confirm my position. *Socrates* was unhappy and vicious at the time of life when the physiomy assumes it's principal characters, from infancy up to the age of seventeen years. He was born in a poor condition; his father had determined, notwithstanding his own declared reluctance, to breed him to the art of sculpture. Nothing less than the authority of an oracle could rescue him from this parental tyranny. *Socrates* acknowledged, in conformity to the decision of a Physionomist, that he was addicted to women and wine, the vices into which men are usually thrown by the pressure of calamity: at length he became reformed, and nothing could be more beautiful than this Philosopher when he discoursed about the DEITY. As to the happy *Alcibiades*, born in the very lap of fortune, the lessons of *Socrates*, and the love of his parents and fellow-citizens, expanded in him at once beauty of person and of soul; but having been at last betrayed into irregular courses, through the influence of evil communications, nothing remained but the bare physiomy of virtue. Whatever seduction may be apparent in their first aspect, the ugliness of vice soon discovers itself on the faces of handsome men degraded into wickedness. You can perceive, even under their smiles, a certain marked trait of falsehood and perfidy. This dissonance is communicated even to the voice. Every thing about them is masked like their face.

I beg leave farther to observe, that all the forms of organized beings express intellectual sentiments, not only to the eyes of Man, who studies Nature, but to those of animals, which are instructed at once by their instinct, in such particulars of knowledge as are in many respects so obscure to us. Thus, for example, every species of animal has certain traits which are expressive of it's character. From the sparkling and restless eyes of the tiger you may discover his ferocity and perfidy. The gluttony of the hog is announced by the vulgarity of his attitude, and by the inclination of his head toward the ground. All animals are perfectly well acquainted with those characters, for the Laws of Nature are universal. For instance, though there be in the eyes of man, unless he is very attentive, an exceedingly slight exterior difference between a fox and a species of dog which resembles him, the hen will never mistake the one for the other. She will take no alarm on the approach of the dog, but will be seized with horror the instant that the fox appears.

It is still farther to be remarked, that every animal expresses in it's features some one ruling passion, such as cruelty, sensuality, cunning, stupidity. But Man alone, unless he has been debased by the vices of Society, bears upon his countenance the impress of a celestial origin. There is no one trait of beauty but what may be referred to some virtue: such an one belongs to innocence, such another to candour, those to generosity, to modesty, to heroism. It is to their influence that Man is indebted, in every country, for the respect and confidence with which he is honoured by

by the brute creation, unless they have been forced out of Nature by unrelenting persecution on the part of Man.

Whatever charms may appear in the harmony of the colours and forms of the human figure, there is no visible reason why it's physical effect should exert an influence over animals, unless the impress of some moral power were combined with it. The plumpness of form, or the freshness of colouring, ought rather to excite the appetite of ferocious animals, than their respect or their love. Finally, as we are able to distinguish their impassioned character, they in like manner can distinguish ours, and are capable of forming a very accurate judgment as to our being cruel or pacific. The game-birds, which fly the sanguinary fowler, gather confidently around the harmless shepherd.

It has been affirmed that beauty is arbitrary in every Nation ; but this opinion has been already refuted by an appeal to matter of fact. The mutilations of the Negroes, their incisions into the skin, their flattened noses, their compressed foreheads ; the flat, long, round, and pointed heads of the savages of North-America ; the perforated lips of the Brasilians ; the large ears of the people of Laos, in Asia, and of some Nations of Guiana, are the effects of superstition, or of a faulty education. The ferocious animals themselves are struck at sight of these deformities. All travellers unanimously concur in their testimony that when lions or tygers are famished, which rarely happens, and thereby reduced to the necessity of attacking caravans in the night time, they fall first upon the

beasts of burden, and next upon the Indians, or the black people. The European figure, with it's simplicity, has a much more imposing effect upon them, than when disfigured by African or Asiatic characters.

When it has not been degraded by the vices of Society, the expression of the human face is sublime. A Neapolitan of the name of *John-Baptiste Porta*, took it into his head to trace in it relations to the figures of the beasts. To this effect he has composed a book embellished with engravings, representing the human head under the forced resemblance of the head of a dog, of a horse, of a sheep, of a hog, and of an ox. His system is somewhat favourable to certain modern opinions, and forms a very tolerable alliance with the hideous changes which the passions produce in the human form. But I should be glad to know after what animal *Pigalle* has copied that charming *Mercury* which I have seen at Berlin; and after the passions of what brutes the Grecian Sculptors produced the *Jupiter* of the Capitol, the *Venus pudica*, and the *Apollo* of the Vatican? In what animals have they studied those divine expressions?

I am thoroughly persuaded, as I have said already, that there is not a single beautiful touch in a figure but what may be allied to some moral sentiment, relative to virtue and to Deity. The traits of ugliness might be in like manner referred to some vicious affection, such as jealousy, avarice, gluttony, or rage. In order to demonstrate to our Philosophers how far they are wide of the mark, when they attempt to make the passions the only moving principles of human life, I wish they could be presented with the expression

pression of all the passions collected in one single head; for example, the wanton and obscene leer of a courtesan, with the deceitful and haughty air of an ambitious courtier; and accompanied with an infusion of some touches of hatred and envy, which are negative ambitions. A head which should unite them all would be more horrid than that of *Medusa*; it would be a likeness of *Nero*.

Every passion has an animal character as *John-Baptiste Porta* excellently observed. But every virtue too has it's animal character; and never is a physiognomy more interesting than when you distinguish in it a celestial affection conflicting with an animal passion. Nay I do not know whether it be possible to express a virtue otherwise than by a triumph of this kind. Hence it is that modesty appears so lovely on the face of a young female, because it is the conflict of the most powerful of animal passions with a sublime sentiment. The expression of sensibility likewise renders a face extremely interesting, because the soul, in this case, shews itself in a state of suffering, and because the sight of this excites a virtue in ourselves, namely the sentiment of compassion. If the sensibility of the figure in question is active, that is if it springs itself out of the contemplation of the misery of another, it strikes us still more, because then it becomes the divine expression of generosity.

I have a conviction that the most celebrated statues and pictures of Antiquity owe much of their high reputation entirely to the expression of this double character, that is to the harmony arising out of the two opposite sentiments of passion and virtue. This much is certain, that the most justly boasted master-

pieces

pieces in sculpture and painting among the Ancients, all presented this kind of contrast. Of this abundance of examples might be adduced from their statues, as the *Venus pudica*, and the dying Gladiator, who preserves even when fallen, respect for his own glory, at the moment he is sinking into the arms of death. Such likewise was that of *Cupid* hurling the thunder after the infant *Alcibiades*, which *Pliny* ascribes to *Praxiteles*, or to *Scopas*. An amiable child, launching from his little hand the dread thunderbolt of *Jupiter*, must excite at once the sentiment of innocence, and that of terror. With the character of the God was blended that of a man equally attractive and formidable.

I believe that the paintings of the Ancients expressed still better those harmonies of opposite sentiments. *Pliny*, who has preserved to us the memory of the most noted of them, quotes among others a picture by *Athenion* of Maronea, which represented the cautious and crafty *Ulysses* detecting *Achilles* under the disguise of a young woman, by presenting an assortment of female trinkets, among which he had carelessly, and without appearance of art, introduced a sword. The lively emotion with which *Achilles* lays hold of that sword, must have exhibited a charming contrast with the habit, and the composed deportment of his nymph character. There must have resulted another no less interesting, in the character of *Ulysses*, with his air of reserve, and the expression of his satisfaction under the restraint of prudence, fearful lest in discovering *Achilles* he should at the same time betray himself.

Another piece still more affecting, from the pencil
of

of *Aristides* of Thebes, represented *Biblis* languishing to death of the love which she bore to her own brother. In it there must have been distinctly represented the sentiment of virtue repelling the idea of a criminal passion, and that of fraternal friendship, which recalled the heart to love under the very appearances of virtue. These cruel consonances; despair at the thought of being betrayed by her own heart, the desire of dying, in order to conceal her shame, the desire of life to enjoy the sight of the beloved object, health wasting away under the pressure of conflicts so painful, must have expressed, amidst the languors of death and of life, contrasts the most interesting, on the countenance of that ill-fated maid.

In another picture of the same *Aristides* was represented to admiration, a mother wounded in the breast during the siege of a city, giving suck to her infant. She seemed afraid, says *Pliny*, lest it should draw in her blood together with her milk. *Alexander* prized it so highly that he had it conveyed to Pella the place of his birth. What emotions must have been excited, in contemplating a triumph so exalted as that of maternal affection absorbing all sense of personal suffering! *Poussin*, as we have seen, has borrowed from this virtue the principal expression of his picture of the Deluge.

Rubens has employed it in a most wonderful manner in giving expression to the face of his *Mary de Medicis*, in which you distinguish at once the anguish and the joy of child-bearing. He farther heightens the violence of the physical passion, by the careless attitude into which the Queen is thrown, in an easy-chair,

chair, and by her naked foot, which has shaken off the slipper ; and on the other hand, he conveys the sublimity of the moral sentiment awakened in her by the high destiny of her infant, who is presented to her by a God, reposed in a cradle of bunches of grapes and ears of corn, symbols of the felicity of his reign.

It is thus that the great Masters, not satisfied with opposing mechanically groups of figures and vacuity, shades and lights, children and old men, feet and hands, pursue with unremitting care those contrasts of our internal powers which express themselves on “ the human face divine,” in touches ineffable, and which must constitute the eternal charm of their productions. The Works of *Le Sueur*, abound in these contrasts of sentiment, and he places them in such perfect harmony with those of the elementary nature, that the result from them is the sweetest and the most profound melancholy. But it has been much easier for his pencil, to paint, than for my pen to describe them.

I shall adduce but one example more to my present purpose, taken from *Poussin*, an Artist most admirable for his skill in graphic composition, but whose colours have suffered considerably from the hand of time. The piece to which I refer is his picture of the rape of the Sabine women. While the Roman soldiery are carrying off by force in their arms the terrified young women of the Sabines, there is a Roman officer, who is desirous of getting possession of one extremely beautiful as well as young. She has taken refuge in the arms of her mother. He dares not presume to offer violence to her, but seems to address the mother with all the ardour of love tempered with respect ;

respect ; his countenance thus speaks : “ She will be
 “ happy with me ! Let me be indebted for her to
 “ love, and not to fear ! I am less eager to rob you
 “ of a daughter, than to give you a son.” It is thus
 that, while he conforms himself in dressing his characters to the simplicity of the age which rendered all conditions nearly similar, he has distinguished the officer from the soldier not by his garb but by his manners. He has caught as he usually does, the moral character of his subject, which produces a very different effect from that of mere *costume*.

I should have been extremely happy had we been favoured from the pencil of the same ingenious Artist, with a representation of these same female Sabines, after they had become wives and mothers, rushing in between the two contending armies of the Sabines and Romans, “ Running,” as *Plutarch* tells us, “ some on this side, others on that, in tears, shrieking, exclaiming ; thrusting themselves through the
 “ clashing of arms, and heaps of the dead strewn
 “ along the ground, like persons frantic or possessed
 “ with a spirit, carrying their sucking infants in their
 “ arms, with hair dishevelled, appealing now to Romans, now to Sabines, by every tender adjuration
 “ that can reach the heart of Man.*”

The most powerful effects of love, as has been said, arise out of contradictory feelings melting into each other, just as those of hatred frequently are produced from similar sentiments which happen to clash. Hence it is that no feeling can be more agreeable than to find a friend in a man whom we considered

* *Plutarch's* life of *Romulus*.

as an enemy ; and no mortification so poignant as meeting an enemy in the man whom we depended upon as a friend. These harmonic effects often render a slight and transient kindness more estimable than a continued series of good offices ; and a momentary offence more outrageous than the declared enmity of a whole life-time ; because in the first case feelings diametrically opposite graciously unite ; and in the second congenial feelings violently clash. Hence too it is that a single blemish, amidst the valuable qualities of a man of worth, frequently appears more offensive than all the vices of a libertine who displays only a solitary virtue, because from the effect of contrast these two qualities become more prominent, and eclipse the others in the two opposite characters. It proceeds likewise from the weakness of the human mind, which attaching itself always to a single point of the object which it contemplates, fixes on the most prominent quality in framing it's decisions. It is impossible to enumerate the errors into which we are every day falling for want of studying these elementary principles of Nature. It would be possible undoubtedly to extend them much farther ; it is sufficient for my purpose, if I have given a demonstration of their existence, and inspired others with an inclination to apply them properly.

These harmonies acquire greater energy from the adjoining contrasts which detach them, from the consonances which repeat them, and from the other elementary Laws which have been indicated : but if with these are blended some one of the moral sentiments of which I have been presenting a faint sketch,
in

in this case the effect resulting from the whole is inexpressibly delightful. Thus, for example, a harmony becomes in some sort celestial, when it contains a mystery, which always supposes something marvellous and divine. I one day felt a most agreeable effect, as I was looking over a collection of old prints which represented the history of *Adonis*. *Venus* had stolen the infant *Adonis* from *Diana*, and was educating him with her son *Cupid*. *Diana* was determined to recover him, as being the son of one of her nymphs. *Venus* then having on a certain day alighted from her chariot drawn by doves, was walking with the two boys in a valley of Cythera. *Diana*, at the head of her armed retinue, places herself in ambush in a forest through which *Venus* was to pass. *Venus* as soon as she perceived her adversary approaching, and incapable either to escape or to prevent the recapture of *Adonis*, was instantly struck with the thought of clapping wings on his shoulders, and presenting *Cupid* and him together to *Diana*, desired her to take either of the children which she believed to be her property. Both being equally beautiful, both of the same age, and both furnished with wings, the chaste Goddess of the woods was deterred from choosing either the one or the other, and refrained from taking *Adonis* for fear of taking *Cupid*.

This fable contains several sentimental beauties. I related it one day to *J. J. Rousseau*, who was highly delighted with it. "Nothing pleases me so much," said he, "as an agreeable image which conveys a moral sentiment." We were at that time in the plain of Neuilly, near a park in which we saw a group
of

of Love and Friendship, under the forms of a young man and young woman of fifteen or sixteen years of age, embracing each other with mouth to mouth. Having looked at it he said to me, "Here is an ob-
 " scene image presented after a charming idea. No-
 " thing could have been more agreeable than a re-
 " presentation of the two figures in their natural
 " state : Friendship, as a grown young woman care-
 " sing an infant *Cupid*." Being on this interesting subject, I repeated to him the conclusion of that touching fable of *Philomela* and *Progné*.

Le désert est-il fait pour des talens si beaux ?
 Venez faire aux cités eclater leurs merveilles :
 Aussi bien, en voyant les bois,
 Sans cesse il vous souvient que Térée autrefois,
 Parmi des demeures pareilles,
 Exerça sa fureur sur vos divins appas.—
 Et c'est le souvenir d'un si cruel outrage,
 Qui fait, reprit sa sœur, que je ne vous suis pas :
 En voyant les hommes, hélas !
 Il m'en souvient bien davantage.

Why waste such sweetness on the desert air !
 Come, charm the city with thy tuneful note.
 Think too, in solitude, that form so fair
 Felt violation : flee the horrid thought.

Ah ! sister dear, said Philomel replies,
 'Tis this that makes me shun the haunts of men :
 Terëus and Courts the anguish'd heart allies,
 And hastes, for shelter, to the woods again. .

"What a series of ideas !" cried he, "how ten-
 " derly affecting it is !" His voice was stifled, and
 the tears rushed to his eyes. I perceived that he was
 farther moved by the secret correspondencies between
 the

the talents and the destiny of that bird, and his own situation.

It is obvious, then, in the two allegorical subjects of *Diana* and *Adonis*, and of Love and Friendship, that there are really within us two distinct powers, the harmonies of which exalt the soul, when the physical image throws us into a moral sentiment, as in the first example; and abase it, on the contrary, when a moral sentiment recalls us to a physical sensation, as in the example of Love and Friendship.

The suppressed circumstances contribute farther to the moral expressions, because they are conformable to the expansive nature of the soul. They conduct it over a vast field of ideas. It is to these suppressions that the fable of the Nightingale is indebted for the powerful effect which it produces. Add to these a multitude of other oppositions, which I have not leisure to analyze.

The farther that the physical image is removed from us the greater extension is given to the moral sentiment; and the more circumscribed that the first is the more energetic the sentiment is rendered. It is this undoubtedly which communicates so much force to our affections, when we regret the death of a friend. Grief in this case conveys the soul from one World to the other, and from an object full of charms to a tomb. Hence it is that the following passage from *Jeremiah* contains a strain of sublime melancholy: *Vox in Ramâ audita est; ploratus & ululatus multus: Rachel plorans filios suos, & noluit consolari, quia non sunt.* “A voice was heard in Ramah,
 VOL. II. D d “lamentation

“ lamentation and bitter weeping ; Rachel weeping
 “ for her children, refused to be comforted, because
 they are not.*” All the consolations which this
 World can administer are dashed to pieces against
 this word of maternal anguish, *non sunt*.

The single *jet d'eau* of Saint-Cloud pleases me
 more than all its cascades. However, though the
 physical image should not escape and lose itself in
 infinity, it may convey sorrow thither, when it re-
 flects the same sentiment. I find in *Plutarch* a noble
 effect of this progressive consonance.” “ *Brutus*,”
 says he, “ giving all up for lost, and having resolved
 “ to withdraw from Italy, passed by land through
 “ Lucania, and came to Elea which is situated on the
 “ sea-side. *Portia* being to return from thence to
 “ Rome, endeavoured to conceal the grief which op-
 “ pressed her in the prospect of their approaching se-
 “ paration ; but with all her resolution and magna-
 “ nimity she betrayed the sorrow which was preying
 “ on her heart, on seeing a picture which there acci-
 “ dentally caught her eye. The subject of the piece
 “ was taken from the *Iliad*, and represented the parting
 “ of *Hector* and *Andromache*, when he was preparing
 “ to take the field, and at the instant when he was
 “ delivering the infant *Ashtanax* into the arms of his
 “ mother, while her eyes remain immoveably fixed
 “ on *Hector*. The resemblance which the picture
 “ bore to her own distress made her burst into tears ;
 “ and several times a day she resorted to the place
 “ where it hung to gaze at it, and to weep before it.

* Jeremiah, chap. xxxi. ver. 15.

“ This being observed by *Acilius*, one of the friends
 “ of *Brutus*, he repeated the passage from *Homer* in
 “ which *Andromache* expresses her inward emotion :

Εκτὼρ ἀτὰρ σύ μοι ἔσσι πατὴρ καὶ πότνια μήτηρ,
 Ἡ δὲ κασίγνητος· σύ δὲ μοι θαλὲρ παρκαοίτης.

Yet while my *Hector* still survives, I see
 My father, mother, kindred, all in thee,
 My wedded Lord.....,

“ *Brutus*, replied, with a smile, *But I must not answer*
 “ *Portia* in the words of *Hector* to *Andromache* :

Αλλ' εἰς οἶκον ἴσθα, τὰ στυγῆς ἔργα κόμιζε,
 Ἴσον τ' ἡλακώτην τε, καὶ ἀμφιπόλοισι κέλευε.

.....hasten to thy tasks at home,
 There guide the spindle, and direct the loom.

“ For though the natural weakness of her body prevents
 “ her from acting what the strength of men only can per-
 “ form, yet she has a mind as valiant, and as active for
 “ the good of her Country, as we have.”

This picture was undoubtedly placed under the peristyle of some temple built on the shore of the Sea. *Brutus* was on the point of embarking without pomp, and without a retinue. His wife, the daughter of *Cato*, had accompanied him, perhaps on foot. The moment of separation approaches ; in order to soothe her anguish she fixes her eyes on that painting consecrated to the Gods. She beholds in it the last long farewell of *Hector* and *Andromache* ; she is overwhelmed ; and to reanimate her fortitude turns her eyes upon her husband. The comparison is completed, her courage forsakes her, tears gush out, con-

jugal affection triumphs over love of Country. Two virtues in opposition ! Add to these the characters of a wild nature, which blend so well with human grief : profound solitude, the columns and the cupola of that antique temple, corroded by the keen air of the Sea, and marbled over with mosses which give them the appearance of green bronze ; a setting Sun which gildes the Summit of it ; the hollow murmurs of the Sea at a distance, breaking along the coast of Lucania ; the towers of Elea perceptible in the bosom of a valley between two steep mountains, and that sorrow of *Portia* which hurries us back to the age of *Andromache*. What a picture, suggested by the contemplation of a picture ! O, ye Artists, could you but produce it, *Portia* would in her turn call forth many a tear.

I could multiply without end proofs of the two powers by which we are governed. Enough has been said on the subject of a passion the instinct of which is so blind, to evince that we are attracted to it, and actuated by it, from Laws widely different from those of digestion. Our affections demonstrate the immortality of the soul, because they expand in all the circumstances in which they feel the attributes of Deity, such as that of infinity, and never dwell with delight on the Earth, except on the attractions of virtue and innocence.

OF SOME OTHER SENTIMENTS OF DEITY, AND AMONG
OTHERS, OF THAT OF VIRTUE.

There are besides these a great number of sentimental Laws, which it has not been in my power at present to unfold : such are those which suggest pre-
sentiments

sentiments, omens, dreams, the reference of events fortunate and unfortunate to the same epochs, and the like. Their effects are attested among Nations polished and savage, by Writers profane and sacred, and by every man who pays attention to the Laws of Nature. These communications of the soul with an order of things invisible, are rejected by the learned of modern times, because they come not within the province of their systems and of their almanacs; but how many things exist, which are not reducible to the plans of our reason and which have not been so much as perceived by it !

There are particular laws which demonstrate the immediate action of Providence on the Human Race, and which are opposite to the general Laws of Physics. For example, the principles of reason, of passion, and of sentiment, as well as the organs of speech and of hearing, are the same in men of all countries; nevertheless the language of Nations differs all the world over. How comes it that the art of speech is so various among beings who all have the same wants, and that it should be constantly changing in the transmission from father to son, to such a degree that we modern French no longer understand the language of the Gauls, and that the day is coming when our posterity will be unable to comprehend ours? The ox of Bengal bellows like that of the Ukraine, and the nightingale pours out the same melodious strains to this day, in our climates, as those which charmed the ear of the Bard of Mantua by the banks of the Po.

It is impossible to maintain, though it has been alleged by certain Writers of high reputation, that

languages are characterized by climates ; for if they were subjected to influence of this kind, they would never vary in any country in which the climate is invariable. The language of the Romans was at first barbarous, afterwards majestic, and is become at last soft and effeminate. They are not rough to the North, and soft to the South, as *J. J. Rousseau* pretends, who in treating this point has given far too great extension to physical Laws. The language of the Russians, in the North of Europe, is very soft, being a dialect of the Greek ; and the jargon of the southern provinces of France is harsh and coarse. The Laplanders, who inhabit the shores of the Frozen Ocean, speak a language which is very grateful to the ear ; and the Hottentots, who inhabit the very temperate climate of the Cape of Good-Hope, cluck like India cocks. The language of the Indians of Peru is loaded with strong aspirations, and consonants of difficult pronunciation. Any one, without going out of his closet, may distinguish the different characters of the language of each Nation, by the names presented on the geographical charts of the Country, and may satisfy himself that their harshness, or softness, has no relation whatever to those of Latitude.

Other observers have asserted that the languages of Nations have been determined and fixed by their great Writers. But the great Writers of the age of *Augustus* did not secure the Latin language from corruption, previously to the reign of *Marcus Aurelius*. Those of the age of *Louis XIV.* already begin to be antiquated among ourselves. If posterity fixes the character

character of a language to the age which was productive of great Writers, it is not because, as they allege, it is then at it's greatest purity ; for you find in them as many of those inversions of phraseology, of those decompositions of words, and of those embarrassed syntaxes, which render the metaphysical study of all Grammar tiresome and barbarous ; but it is because the Writings of those great men sparkle with maxims of virtue, and present us with a thousand perspectives of the DEITY. I have no doubt that the sublime sentiments which inspire them illuminate them still in the order and disposition of their Works, seeing they are the sources of all harmony. From this, if I am not mistaken, results the unalterable charm which renders the perusal of them so delicious, at all times, and to the men of all Nations. Hence it is that *Plutarch* has eclipsed most of the Writers of Greece, though he was of the age neither of *Pericles*, nor of *Alexander* ; and that the translation of his Works into old French by the good *Amyot*, will be more generally read by posterity than most of the original Works produced even in the age of *Louis XIV.* It is the moral goodness of a period which characterizes a language, and which transmits it unaltered to the generation following. This is the reason that the languages, the customs, and even the form of dresses are in Asia transmitted inviolably from generation to generation, because fathers, all over that Continent, make themselves beloved by their children. But these reasons do not explain the diversity of language which subsists between one Nation and another. It must ever appear to me altogether super-

natural that men who enjoy the same elements, and are subjected to the same wants should not employ the same words in expressing them. There is but one Sun to illuminate the whole Earth, and he bears a different name in every different land.

I beg leave to suggest a farther effect of a Law to which little attention has been paid ; it is this, that there never arises any one man eminently distinguished, in whatever line, but there appears at the same time, either in his own Country, or in some neighbouring Nation, an antagonist possessing talents, and a reputation, in complete opposition : such were *Democritus* and *Heraclitus*, *Alexander* and *Diogenes*, *Descartes* and *Newton*, *Corneille* and *Racine*, *Bossuet* and *Fenelon*, *Voltaire* and *J. J. Rousseau*. I had collected on the subject of the two extraordinary men last mentioned, who were contemporaries, and who died the same year, a great number of strictures, which demonstrate that through the whole course of life they presented a striking contrast in respect of talents, of manners, and of fortune : but I have relinquished this parallel, in order to devote my attention to a pursuit which I deemed much more useful.

This balancing of illustrious characters will not appear extraordinary, if we consider that it is a consequence from the general Law of contraries which governs the World, and from which all the harmonies of Nature result : it must therefore particularly manifest itself in the Human Race, which is the centre of the whole ; and it actually does discover itself in the wonderful equilibrium, conformably to which the two sexes are born in equal numbers. It does not fix

on individuals in particular, for we see families consisting wholly of daughters, and others all sons ; but it embraces the aggregate of a whole city, and of a Nation, the male and female children of which are always produced very nearly equal in number. Whatever inequality of sex there may exist in the variety of births in families, the equality is constantly restored in the aggregate of a people.

But there is another equilibrium no less wonderful, which has not I believe become an object of attention. As there are a great many men who perish in war, in sea-voyages, and by painful and dangerous employments, it would thence follow, that, at the long run, the number of women would daily go on in an increasing proportion. On the supposition that there perishes annually one tenth part more of men than of women, the balancing of the sexes must become more and more unequal. Social ruin must increase from the very regularity of the natural order. This however does not take place ; the two sexes are always very nearly equally numerous : their occupations are different, but their destiny is the same. The women, who frequently impel men to engage in hazardous enterprizes to support their luxury, or who foment animosities and even kindle wars among them to gratify their vanity, are carried off in the security of pleasure and indulgence, by maladies to which men are not subject ; but which frequently result from the moral, physical, and political pains which the men undergo in consequence of them. Thus the equilibrium of birth between the sexes is re-established by the equilibrium of death.

Nature has multiplied those harmonic contrasts in all her Works, relatively to Man; for the fruits which minister to our necessities frequently possess in themselves opposite qualities, which serve as a mutual compensation.

These effects, as has been elsewhere demonstrated, are not the mechanical results of climate, to the qualities of which they are frequently in opposition. All the Works of Nature have the wants of Man for their end; as all the sentiments of Man have Deity for their principle. The final intentions of Nature have given to Man the knowledge of all her Works, as it is the instinct of Deity which has rendered Man superior to the Laws of Nature. It is this instinct which, differently modified by the passions, engages the inhabitants of Russia to bathe in the iccs of the Neva, during the severest cold of Winter, as well as the Nations of Bengal in the waters of the Ganges; which, under the same Latitudes, has rendered women slaves in the Philippine Islands, and despots in the Island of Formosa; which makes men effeminate in the Moluccas, and intrepid in Macassar; and which forms, in the inhabitants of one and the same city, tyrants, citizens, and slaves.

The sentiment of Deity is the first mover of the human heart. Examine a man in those unforeseen moments, when the secret plans of attack and defence with which social man continually encloses himself are suppressed, not on the sight of a vast ruin, which totally subverts them, but simply on seeing an extraordinary plant or animal: "Ah, my God!" exclaims he, "how wonderful this is!" and he invites the
first

first person who happens to pass by to partake of his astonishment. His first emotion is a transport of delight which raises him to God; and the second a benevolent disposition to communicate his discovery to men; but the social reason quickly recalls him to personal interest. As soon as he sees a certain number of spectators assembled round the object of his curiosity, "It was I," says he, "who observed it first." Then, if he happens to be a Scholar, he fails not to apply his system to it. By and by he begins to calculate how much this discovery will bring him in; he throws in some additional circumstances in order to heighten the appearance of the marvellous, and he employs the whole credit of his junto to puff it off, and to persecute every one who presumes to differ from him in opinion. Thus every natural sentiment elevates us to God, till the weight of our passions, and of human institutions, brings us back again to self. *J. J. Rousseau* was accordingly in the right, when he said that Man was good, but that men were wicked.

It was the instinct of Deity which first assembled men together, and which became the basis of the Religion and of the Laws whereby their union was to be cemented. On this it was that virtue found a support, in proposing to herself the imitation of the Divinity, not only by the exercise of the Arts and Sciences, which the ancient Greeks for this effect denominated the petty virtues; but in the result of the divine power and intelligence, which is beneficence. It consisted in efforts made upon ourselves, for the good of Mankind, in the view of pleasing God only.

It

It gave to Man the sentiment of his own excellence, by inspiring him with the contempt of terrestrial and transient enjoyments, and with a desire after things celestial and immortal. It was this sublime attraction which exalted courage to the rank of a virtue, and which made Man advance intrepidly to meet death amidst so many anxieties to preserve life. Gallant *d'Assas*, what had you to hope for on the Earth, when you poured out your blood in the night without a witness, in the plains of Klosterkam, for the salvation of the French army? And you, generous *Eustace de St. Pierre*, what recompence did you expect from your Country, when you appeared before her tyrants with the halter about your neck, ready to meet an infamous death in saving your fellow-citizens? Of what avail to your insensible ashes were the statues and the eulogiums which posterity was one day to consecrate to your memory? Could you so much as hope for this reward, in return for sacrifices either unknown, or loaded with opprobriousness? Could you be flattered in ages to come with the empty homage of a world separated from you by eternal barriers? And you, more glorious still in the sight of God, obscure citizens, who sink ingloriously into the grave; you whose virtues draw down upon your heads shame, calumny, persecution, poverty, contempt, even on the part of those who dispense the honours of a present state, could you have forced your way through paths so dreary and so rude, had not a light from Heaven illuminated your eyes?*

* It is impossible for virtue to subsist independently of Religion. I do not mean the theatrical virtues which attract public admiration,
and

This respect for virtue is the source of that which we pay to ancient Nobility, and which has introduced, in process of time, unjust and odious differences

and this, many a time, by means so contemptible that they may be rather considered as so many vices. The very Pagans have turned them into ridicule. See what *Marcus Aurelius* has said on the subject. By virtue I understand the good which we do to men without expectation of reward on their part, and frequently at the expence of fortune, nay even of reputation. Analyze all those whose traits have appeared to you the most striking; there is no one of them but what points out Deity, nearer or more remote. I shall quote one not generally known, and singularly interesting from it's very obscurity.

In the last war in Germany a Captain of cavalry was ordered out on a foraging party. He put himself at the head of his troop, and marched to the quarter assigned him. It was a solitary valley in which hardly any thing but woods could be seen. In the midst of it stood a little cottage; on perceiving it he went up, and knocked at the door; out comes an ancient Hernouten, with a beard silvered by age. "Father," says the officer, "shew me a field where I can set my troopers a-foraging"....."Presently," replied the Hernouten. The good old man walked before, and conducted them out of the valley. After a quarter of an hour's march they found a fine field of barley: "There is the very thing we want," says the Captain....."Have patience for a few minutes," replies his guide, "you shall be satisfied." They went on, and at the distance of about a quarter of a league farther they arrive at another field of barley. The troop immediately dismounted, cut down the grain, trussed it up, and remounted. The officer upon this says to his conductor, "Father, you have given yourself and us unnecessary trouble; the first field was much better than this."....."Very true, Sir," replied the good old man, "but it was not mine."

This stroke goes directly to the heart. I defy an atheist to produce me any thing once to be compared with it. It may be proper to observe that the Hernoutens are a species of Quakers, scattered over some cantons of Germany. Certain Theologians have maintained

ences among men, whereas originally, it was designed to establish among them respectable distinctions alone.

The

maintained that heretics were incapable of virtue, and that their good actions were utterly destitute of merit. As I am no Theologian I shall not engage in this metaphysical discussion, though I might oppose to their opinion the sentiments of St. *Jerome*, and even those of St. *Peter*, with respect to Pagans, when he says to *Cornelius* the centurion: “Of a truth, I perceive that God is no
“respector of persons; but in every Nation, he that feareth Him,
“and worketh righteousness, is accepted with Him.”† But I should be glad to know what those Theologians think of the charity of the good Samaritan, who was a schismatic. Surely they will not venture to start objections against a decision pronounced by JESUS CHRIST himself. As the simplicity and depth of his divine responses form an admirable contrast with the dishonesty and subtilty of modern doctors, I shall transcribe the whole passage from the Gospel, word for word.

“And behold, a certain lawyer stood up, and tempted him,
“saying, Master, what shall I do to inherit eternal life?”

“He said unto him, What is written in the law? how readest
“thou?”

“And he answering, said, Thou shalt love the LORD thy God
“with all thy heart, and with all thy soul, and with all thy
“strength, and with all thy mind; and thy neighbour as thyself.

“And he said unto him, Thou hast answered right: this do,
“and thou shalt live.

“But he willing to justify himself, said unto Jesus, And who
“is my neighbour?”

“And Jesus answering, said, A certain *man* went down from
“Jerusalem to Jericho, and fell among thieves, which stripped
“him of his raiment, and wounded *him*, and departed, leaving
“*him* half-dead.

“And by chance there came down a certain priest that way;
“and when he saw him, he passed by on the other side.

“And likewise a Levite, when he was at the place, came and
“looked on *him*, and passed by on the other side.

† Acts of the Apostles, chap. x. ver. 34, 35.

“But

The Asiatics, more equitable, attached nobility only to places rendered illustrious by virtue. An aged

“ But a certain Samaritan, as he journeyed, came where he was ; and when he saw him, he had compassion *on him*.

“ And went to him, and bound up his wounds, pouring in oil and wine, and set him on his own beast, and brought him to an inn, and took care of him.

“ And on the morrow, when he departed, he took out two pence, and gave *them* to the host, and said unto him, Take care of him : and whatsoever thou spendest more, when I come again, I will repay thee.

“ Which now of these three, thinkest thou, was neighbour unto him that fell among the thieves ?

“ And he said, He that shewed mercy on him. Then said Jesus unto him, Go, and do thou likewise.”†

I shall be carefully on my guard against adding any reflections of my own on this subject, except this simple observation, that the action of the Samaritan is far superior to that of the HERNOUTEN ; for though the second makes a great sacrifice, he is in some sort determined to it by force ; a field must of necessity have been subjected to forage. But the Samaritan entirely obeys the impulse of humanity. His action is free, and his charity spontaneous. This stricture, like all those of the Gospel, contains in a few words a multitude of clear and forcible instructions, respecting the duties inculcated in the second table of the Law. It would be impossible to replace them by others, were imagination itself permitted to dictate them. Weigh all the circumstances of the restless and persevering charity of the Samaritan. He dresses the wounds of an unfortunate wretch, and places him on his own horse ; he exposes his own life to danger, by stopping, and walking on foot, in a place frequented by thieves. He afterwards makes provision, in the inn, for the future as well as for the present necessities of the unhappy man, and continues his journey without expecting any recompense whatever from the gratitude of the person whom he had succoured.

† Luke, chap. x. ver. 25—37.

tree, a well, a rock, objects of stability, appeared to them as alone adapted to perpetuate the memory of what was worthy of being remembered. There is not all over Asia an acre of land but what is dignified by a monument. The Greeks and Romans who issued out of it, as did all the other Nations of the World, and who did not remove far from it, imitated in part the customs of our first Fathers. But the other Nations which scattered themselves over the rest of Europe, where they were long in an erratic state, and who withdrew from those ancient monuments of virtue, chose rather to look for them in the posterity of their great men, and to see the living images of them in their children. This is the reason, in my opinion, that the Asiatics have no Noblesse, and the Europeans no monuments.

The instinct of Deity constitutes the charm of the performances which we peruse with most delight. The Writers to whom we always return with pleasure, are not the most sprightly, that is, those who abound the most in the social reason which endures but for a moment, but those who render the action of Providence continually present to us. Hence it is that *Homer, Virgil, Xenophon, Plutarch, Fenelon*, and most of the ancient Writers, are immortal, and please the men of all Nations. For the same reason it is, that books of travels, though for the most part written very artlessly, and though decried by multitudes of various orders in Society, who discern in them an indirect censure of their own conduct, are nevertheless the most interesting part of modern reading;

not

not only because they disclose to us some new benefits of Nature, in the fruits and the animals of foreign countries, but because of the dangers by land and by water which their authors have escaped, frequently beyond all reasonable expectation. Finally, it is because the greatest part of our very learned productions studiously steer clear of this natural sentiment, that the perusal of them is so very dry and disgusting, and that posterity will prefer *Herodotus* to *David Hume*, and the Mythology of the Greeks to all our treatises on Physics; because we love still more to hear the fictions of Deity blended with the History of men, than to reason of men in the History of Deity.

This sublime sentiment inspires Man with a taste for the marvellous, who, from his natural weakness, must have ever been crawling on the ground of which he is formed. It balances in him the sentiment of his misery, which attaches him to the pleasures of habit; and it exalts his soul, by infusing into him continually the desire of novelty. It is the harmony of human life, and the source of every thing delicious and enchanting that we meet with in the progress of it. With this it is that the illusions of love ever veil themselves, always representing the beloved object as something divine. It is this which opens to ambition perspectives without end. A peasant appears desirous of nothing in the World but to become the church-warden of his village. Be not deceived in the man! open to him a career without any impediment in his way; he is groom, he becomes highway-man, captain of the gang, a commander in chief of

armies, a king, and never rests till he is worshipped as a God. He shall be a *Tamerlane* or a *Mahomet*.

An old rich tradesman, nailed to his easy-chair by the gout, tells us that he has no higher ambition than to die in peace. But he sees himself eternally renovating in his posterity. He enjoys a secret delight in beholding them mount, by the dint of his money, along all the ascending steps of dignity and honour. He himself reflects not that the moment approaches when he shall have nothing in common with that posterity, and that while he is congratulating himself on being the source of their future glory, they are already employing the upstart glory which they have acquired, in drawing a veil over the meanness of their original. The atheist himself, with his negative wisdom, is carried along by the same impulse. To no purpose does he demonstrate to himself the nothingness, and the fluctuation of all things : his reason is at variance with his heart. He flatters himself inwardly with the hope that his book, or his monument, will one day attract the homage of posterity ; or perhaps that the book, or the tomb, of his adversary will cease to be honoured. He mistakes the **DEITY**, merely because he puts himself in his place.

With the sentiment of Deity, every thing is great, noble, beautiful, invincible, in the most contracted sphere of human life ; without it, all is feeble, displeasing, and bitter, in the very lap of greatness. This it was which conferred empire on Rome and Sparta, by shewing to their poor and virtuous inhabitants the Gods as their protectors and fellow-citizens. It was the destruction of this sentiment which
gave

gave them up, when rich and vicious, to slavery ; when they no longer saw in the Universe any other Gods except gold and pleasure. To no purpose does a man make a bulwark around himself of the gifts of fortune ; the moment this sentiment is excluded from his heart languor takes possession of it. If it's absence is prolonged, he sinks into sadness, afterwards into profound and settled melancholy, and finally into despair. If this state of anxiety becomes permanent, he lays violent hands on himself. Man is the only sensible being which destroys itself in a state of liberty. Human life, with all it's pomp, and all it's delights, ceases to him to have the appearance of life, when it ceases to appear to him immortal and divine.*

What-

* *Plutarch* remarks, that *Alexander* did not abandon himself to those excesses which sullied the conclusion of his glorious career, till he believed himself to be forsaken of the Gods. Not only does this sentiment become a source of misery, when it separates itself from our pleasures ; but when, from the effect of our passions, or of our institutions, which pervert the Laws of Nature, it presses upon our miseries themselves. Thus, for example, when after having given mechanical Laws to the operations of the soul, we come to make the sentiment of infinity to bear upon our physical and transient evils ; in this case, by a just re-action, our misery becomes insupportable. I have presented only a faint sketch of the two principles in Man ; but to whatever sensation of pain, or of pleasure, they may be applied, the difference of their nature, and their perpetual re-action, will be felt.

On the subject of *Alexander* forsaken of the Gods, it is matter of surprize to me that the expression of this situation should not have inspired the genius of some Grecian Artist. Here is what I find on this subject in *Addison* : “ There is, in the same gallery,

“ (at Florence) a fine bust of *Alexander* the Great, with the face

Whatever be the disorders of Society, this celestial instinct is ever amusing itself with the children of men. It inspires the man of genius, by disclosing itself to him under eternal attributes. It presents to the Geometrician, the ineffable progressions of infinity ; to the Musician, rapturous harmonies ; to the Historian, the immortal shades of virtuous men. It raises a Parnassus for the Poet, and an Olympus for the Hero. It sheds a lustre on the unfortunate days of the labouring poor. Amidst the luxury of Paris, it extracts a sigh from the breast of the humble native of Savoy after the sacred covering of the snows upon his mountains. It expatiates along the vast Ocean, and recalls, from the gentle climates of India, the European mariner, to the stormy shores of the West. It bestows a country on the wretched, and fills with regret those who have lost nothing. It covers our cradles with the charms of innocence, and the tombs of our forefathers with the hopes of immortality. It reposes in the midst of tumultuous cities, on the palaces of mighty Kings, and on the august temples of Religion. It frequently fixes its residence in the de-

“ turned toward Heaven, and impressed with a certain dignified
 “ air of chagrin and dissatisfaction. I have seen two or three
 “ ancient busts of *Alexander*, with the same air, and in the same
 “ attitude ; and I am disposed to believe that the Sculptor pursued the idea of the Conqueror sighing after new worlds, or
 “ some similar circumstance of his History.” *Addison's Voyage to Italy*.) I imagine that the circumstance of *Alexander's* History, to which those busts ought to be referred, is that which represents him complaining of being abandoned of the Gods. I have no doubt that it would have fixed the exquisite judgment of *Addison*, had he recollected the observation made by *Plutarch*.

fert,

fert, and attracts the attention of the Universe to a rock. Thus it is that you are clothed with majesty, venerable ruins of Greece and Rome ! and you too, mysterious pyramids of Egypt ! This is the object which we are invariably pursuing amidst all our restless occupations ; but the moment it discovers itself to us in some unexpected act of virtue, or in some one of those events which may be denominated strokes of Heaven, or in some of those indescribably sublime emotions, which are called sentimental touches by way of excellence, it's first effect is to kindle in the breast a very ardent movement of joy, and the second is to melt us into tears. The soul, struck with this divine light, exults at once in enjoying a glimpse of the heavenly Country, and sinks at the thought of being exiled from it.

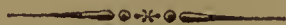
.....Oculis errantibus alto

Quæfivit cœlo lucem, ingemuitque repertâ.

ÆNEID, BOOK IV.

With wandering eyes explor'd the heavenly light,
Then sigh'd, and sunk into the shades of night.

STUDY THIRTEENTH.

APPLICATION OF THE LAWS OF NATURE TO THE
DISORDERS OF SOCIETY.

I HAVE exposed, in this Work, the errors of human opinion, and the mischief which has resulted from them, as affecting morals and social felicity. I have refuted those opinions, and have ventured to call in question even the methods of human Science; I have investigated certain Laws of Nature, and have made, I am bold to affirm, a happy application of them to the vegetable order: but all this mighty exertion would, in my own opinion, prove to be vain and unprofitable, unless I employed it in attempting to discover some remedies for the disorders of Society.

A Prussian Author, who has lately favoured the World with various productions, carefully avoids saying a word respecting the administration of the government of his own Country, because, being only a passenger as he alleges in the vessel of the State, he does not consider himself as warranted to intermeddle with the pilot's province. This thought, like so many others borrowed from books, is a mere effusion of wit. It resembles that of the man, who, seeing a house on the point of being seized with the flames, scampered off without making any attempt to save it, because, forsooth, the house was not his.

For

For my own part, I think myself so much the more obliged to take an interest in the vessel of the State, that I am a passenger on board, and thereby bound to contribute my efforts toward her prosperous navigation. Nay I ought to employ my very leisure, as a passenger, to admonish the steersman of any irregularity, or neglect, which I may have perceived in conducting the business of the ship. Such, to my apprehension, are the examples set us by a *Montesquieu*, a *Fenelon*, and so many other names to be held in everlasting respect, who have in every country consecrated their labours to the good of their compatriots. The only thing that can be with justice objected to me, is my insufficiency. But I have seen much injustice committed; I myself have been the victim of it. Images of disorder have suggested to me ideas of order. Besides, my errors may perhaps serve as a foil to the wisdom of those who shall detect them. Were I but to present one single useful idea to my Sovereign, whose bounty has hitherto supported me, though my services remain unrewarded, I shall have received the most precious recompense that my heart can desire: if I am encouraged to flatter myself with the thought that I have wiped away the tears from the eyes of but one unfortunate fellow-creature, such a reflection would wipe away mine own in my dying moments.

The men who can turn the distresses of their Country to their own private emolument, will reproach me with being its enemy, in the hacknied observation, that things have always been so, and that all goes on very well, because all goes on well

for them. But the persons who discover, and who unveil, the evils under which their Country labours, they are not the enemies which she has to fear; the persons who flatter her, they are her real enemies. The Writers assuredly, such as *Horace* and *Juvenal*, who predicted to Rome her downfall, when at the very height of her elevation, were much more sincerely attached to her prosperity, than those who offered incense to her tyrants, and made a gain of her calamities. How long did the Roman Empire survive the salutary warnings of the first? Even the good Princes who afterwards assumed the government of it, were incapable of replacing it on a solid foundation, because they were imposed upon by their contemporary Writers, who never had the courage to attack the moral and political causes of the general corruption. They satisfied themselves with their own personal reformation, without daring to extend it so much as to their families. Thus it was that a *Titus* and a *Marcus Aurelius* reigned. They were only great Philosophers on the throne. As far as I am concerned, I should believe that I had already deserved well of my Country, had I only announced in her ear this awful truth: That she contains in her bosom more than seven millions of poor, and that their number has been proceeding in an increasing proportion, from year to year, ever since the age of *Louis XIV.*

God forbid that I should wish or attempt to disturb, much less destroy, the different orders of the State. I would only wish to bring them back to the spirit of their natural Institution. Would to God
that

that the Clergy would endeavour to merit, by their virtues, the first place, which has been granted to the sacredness of their functions ; that the Nobility would give their protection to the citizens, and render themselves formidable only to the enemies of the people ; that the administrators of finance, directing the treasures of the Public to flow in the channels of agriculture and commerce, would lay open to merit the road which leads to all useful and honourable employment ; that every woman, exempted by the feebleness of her constitution from most of the burthens of Society, would occupy herself in fulfilling the duties of her gentle destination, those of wife and mother, and thus cementing the felicity of one family ; that, invested with grace and beauty, she would consider herself as one flower in that wreath of delight by which Nature has attached Man to life ; and while she proved a joy and a crown to her husband in particular, the complete chain of her sex might indissolubly compact all the other bonds of national felicity !

It is not my aim to attract the applause of the million ; they will not read my Book ; besides, they are already sold to the rich and the powerful. They are continually, I grant, maligning their purchasers, and even frequently applaud the persons who treat them with some degree of firmness ; but they give such persons up, the moment they are discovered to be objects of hatred to the rich ; for they tremble at the frown of the great, or crawl among their feet on receiving the slightest token of benevolence. By the million I understand not only the lowest order in Society,

ciety, but a great number of others who consider themselves as very far above it.

The people is no idol of mine. If the powers which govern them are corrupted they themselves are the cause of it. We exclaim against the reigns of *Nero* and *Caligula* ; but those detestable Princes were the fruit of the age in which they lived, just as bad vegetable fruits are produced by bad trees : they would not have been tyrants, had they not found among the Romans, informers, spies, parasites, poisoners, prostitutes, hangmen, and flatterers, who told them that every thing went on very well. I do not believe virtue to be the allotment of the people, but I consider it as portioned out among all conditions in life, and in very small quantities, among the little, among the middling, and among the great ; and so necessary to the support of all the orders of Society, that were it entirely destroyed, Country would crumble to pieces like a temple whose pillars had been undermined.

But I am not particularly interested in the people, either from the hope of their applause, or respect to their virtues, but from the labours in which they are employed. From the people it is that the greatest part of my pleasures and of my distresses proceed ; by the people I am fed, clothed, lodged, and they are frequently employed in procuring superfluities for me, while necessities are sometimes wanting to themselves ; from them likewise issue epidemic diseases, robberies, seditions ; and did they present nothing to me but simply the spectacle of their happiness or misery, I could not remain in a state of indifference.

Their

Their joy involuntarily inspires me with joy, and their misery wrings my heart. I do not reckon my obligation to them acquitted when I have paid them a pecuniary consideration for their services. It is a maxim of the hard-hearted rich man, "That artisan and I are quit," says he, "I have paid him." The money which I give to a poor fellow for a service which he has rendered me, creates nothing new for his use; that money would equally circulate, and perhaps more advantageously for him, had I never existed. The people supports therefore without any return on my part, the weight of my existence: it is still much worse when they are loaded with the additional burthen of my irregularities. To them I stand accountable for my vices and my virtues, more than to the magistrate. If I deprive a poor workman of part of his subsistence, I force him, in order to make up the deficiency, to become a beggar or a thief; if I seduce a plebeian young woman, I rob that order of a virtuous matron; if I manifest in their eyes a disregard to Religion, I enfeeble the hope which sustains them under the pressure of their labours. Besides, Religion lays me under an express injunction to love them. When she commands me to love men, it is the People she recommends to me, and not the Great: to them she attaches all the powers of Society, which exist only by them, and for them. Of a far different spirit from that of modern politics, which present Nations to Kings as their domains, she presents Kings to Nations as their fathers and defenders. The people were not made for Kings, but Kings for the people. I am bound, therefore,

fore, I who am nothing, and who can do nothing, to contribute my warmest wishes at least toward their felicity.

Farther, I feel myself constrained, in justice to the commonalty of our own Country, to declare that I know none in Europe superior to them in point of generosity, though, liberty excepted, they are the most miserable of all with whom I have had an opportunity to be acquainted. Did time permit I could produce instances innumerable of their beneficence. Our wits frequently trace caricatures of our fish-women, and of our peasantry, because their only object is to amuse the rich ; but they might receive sublime lessons of virtue, did they know how to study the virtues of the common people : for my own part, I have oftener than once found ingots of gold on a dunghill.

I have remarked, for example, that many of our inferior shop-keepers sell their wares at a lower price to the poor man than to the rich ; and when I asked the reason, the reply was, “ Sir, every body must “ live.” I have likewise observed that a great many of the lower order never haggle, when they are buying from poor people like themselves : “ Every one,” say they, “ must live by his trade.” I saw a little child one day buying greens from the herb-woman : she filled a large apron with the articles which he wanted, and took a penny : on my expressing surprise at the quantity she had given him, she said to me, “ I would not, Sir, have given so much to a “ grown person ; but I would not for the world take “ advantage of a child.” I knew a man of the name
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of *Christal*, in the *rue de la Magdelaine*, whose trade was to go about selling Auvergne-waters, and who supported for five months, *gratis*, an upholsterer, of whom he had no knowledge, and whom a law-suit had brought to Paris, because, as he told me, that poor upholsterer, the whole length of the road, in a public carriage, had from time to time given an arm to his sick wife. That same man had a son eighteen years old, a paralytic and changeling from the womb, whom he maintained with the tenderest attachment, without once consenting to his admission into the Hospital of Incurables, though frequently solicited to that effect by persons who had interest sufficient to procure it: "God," said he to me, "has given me the poor youth: it is my duty to take care of him." I have no doubt that he still continues to support him, though he is under the necessity of feeding him with his own hands, and has the farther charge of a frequently ailing wife.

I once stopped, with admiration, to contemplate a poor mendicant seated on a post in the *rue Bergère*, near the Boulevards. A great many well-dressed people passed by without giving him any thing; but there were very few servant-girls, or women loaded with baskets, who did not stop to bestow their charity. He wore a well-powdered peruque, with his hat under his arm, was dressed in a furtout, his linen white and clean, and every article so trim, that you would have thought these poor people were receiving alms from him, and not giving them. It is impossible assuredly to refer this sentiment of generosity in the common people to any secret suggestion of self-interest, as the enemies of mankind allege in taking
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upon them to explain the causes of compassion. No one of those poor benefactresses thought of putting herself in the place of the unfortunate mendicant, who, it was said, had been a watchmaker, and had lost his eye-sight; but they were moved by that sublime instinct which interests us more in the distresses of the Great, than in those of other men; because we estimate the magnitude of their sufferings by the standard of their elevation, and of the fall from it. A blind watchmaker was a *Belisarius* in the eyes of servant-maids.

I should never have done, were I to indulge myself in detailing anecdotes of this sort. They would be found worthy of the admiration of the rich, were they extracted from the History of the Savages, or from that of the Roman Emperors; were they two thousand years old, or had they taken place two thousand leagues off. They would amuse their imagination, and tranquillize their avarice. Our own commonalty undoubtedly well deserves to be loved. I am able to demonstrate, that their moral goodness is the firmest support of Government, and that, notwithstanding their own necessities, to them our soldiery is indebted for the supplement to their miserable pittance of pay, and that to them the innumerable poor with whom the kingdom swarms, owe a subsistence wrung from penury itself.

SALUS POPULI SUPREMA LEX ESTO, said the Ancients: let the safety of the People be the paramount Law, because their misery is the general misery. This axiom ought to be so much the more sacred in the eyes of Legislators and Reformers, that no Law can be of long duration, and no plan of reform reduced
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into effect, unless the happiness of the people is previously secured. Out of their miseries abuses spring, are kept up, and are renewed. It is from want of having reared the fabric on this sure foundation, that so many illustrious Reformers have seen their political edifice crumble into ruins. If *Agis* and *Cleomenes* failed in their attempts to reform Sparta, it was because the wretched Helots observed with indifference a system of happiness which extended not to them. If China has been conquered by the Tartars, it was because the discontented Chinese were groaning under the tyranny of their Mandarins, while the Sovereign knew nothing of the matter. If Poland has, in our own days, been parcelled out by her neighbours, it was because her enslaved peasantry, and her reduced gentry, did not stand up in her defence. If so many efforts toward reform, on the subject of the clergy, of the army, of finance, of our courts of justice, of commerce, of concubinage, have proved abortive with us, it is because the misery of the people is continually re-producing the same abuses.

I have not seen, in the whole course of my travels, a country more flourishing than Holland. The capital is computed to contain at least a hundred and fourscore thousand inhabitants. An immense commerce presents in that city a thousand objects of temptation, yet you never hear of a robbery committed. They do not even employ soldiers for mounting guard. I was there in 1762, and for eleven years previous to that period no person had been punished capitally. The Laws however are very severe in that Country; but the people who possess the means of easily earning a livelihood, are under no temptation

temptation to infringe them. It is farther worthy of remark, that though they have gained millions by printing all our extravagances in morals, in politics, and in religion, neither their opinions nor their moral conduct have been affected by it, because the people are contented with their condition. Crimes spring up only from the extremes of indigence and opulence.

When I was at Moscow, an aged Genevois who had lived in that city from the days of *Peter I.* informed me, that from the time they had opened to the people various channels of subsistence, by the establishment of manufactures and commerce, seditions, assassinations, robberies, and wilful fires, had become much less frequent than they used to be. Had there not been at Rome multitudes of miserable wretches, no *Catiline* would have started up there. The police, I admit, prevents at Paris very alarming irregularities. Nay it may be with truth affirmed, that fewer crimes are committed in that capital, than in the other cities of the kingdom in proportion to their population; but the tranquillity of the common people in Paris is to be accounted for, from their finding there readier means of subsistence, than in the other cities of the kingdom, because the rich of all the provinces fix their residence in the metropolis. After all, the expence of our police, in guards, in spies, in houses of correction, and in goals, are a burthen to that very people, and becomes an expence of punishments, when they might be transformed into benefits. Besides, these methods are repereussions merely, whereby the people are thrown into concealed irregularities, which are not the least dangerous.

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The first step toward relieving the indigence of the commonalty, is to diminish the excessive opulence of the rich. It is not by them that the people live, as modern politicians pretend. To no purpose do they institute calculations of the riches of a State, the mass of them is undoubtedly limited ; and if it is entirely in the possession of a small number of the citizens, it is no longer in the service of the multitude. As they always see in detail men for whom they care very little, and in overgrown capitals money which they love very much, they infer it to be more advantageous for the kingdom, that a revenue of a hundred thousand crowns should be in the possession of a single person, rather than portioned out among a hundred families, because, say they, the proprietors of large capitals engage in great enterprizes. But here they fall into a most pernicious error. The financier who possesses them only maintains a few footmen more, and extends the rest of his superfluity to objects of luxury and corruption : moreover, every one being at liberty to enjoy in his own way, if he happens to be a miser this money is altogether lost to Society. But a hundred families of respectable citizens could live comfortably on the same revenue. They will rear a numerous progeny, and will furnish the means of living to a multitude of other families of the commonalty, by arts that are really useful, and favourable to good morals.

It would be necessary, therefore, in order to check unbounded opulence, without however doing injustice to the rich, to put an end to the venality of employments, which confers them all on that portion of So-

ciety which needs them the least as the means of subsistence, for it gives them to those who have got money. It would be necessary to abolish pluralities, by which two, three, four, or more offices, are accumulated on the head of one person; as well as reversions, which perpetuate them in the same families. This abolition would undoubtedly destroy that monied aristocracy, which is extending farther and farther in the bosom of the monarchy, and which, by interposing an insurmountable barrier between the Prince and his subjects, becomes in process of time the most dangerous of all governments. The dignity of employments would thereby be greatly enhanced, as they must in this case rise in estimation, being considered as the reward of merit, and not the purchase of money; that respect for gold, which has corrupted every moral principle, would be diminished, and that which is due to virtue would be heightened: the career of public honour would be laid open to all the orders of the State, which, for more than a century past, has been the patrimony of from four to five thousand families, which have transitted all the great offices from hand to hand, without communicating any share of them to the rest of the citizens, except in proportion as they cease to be such, that is, in proportion as they sell to them their liberty, their honour, and their conscience.

Our Princes have been taught to believe, that it was safer for them to trust to the purses, than to the probity of their subjects. Here we have the origin of venality in the civil state; but this sophism falls to the ground the moment we reflect that it subsists not
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in either the ecclesiastical or military order ; and that these great bodies still are, as to the individuals which compose them, the best ordered of any in the State, at least with relation to their police, and to their particular interests.

'The Court employs frequent change of fashions, in order to enable the poor to live on the superfluity of the rich. This palliative is so far good, though subject to dangerous abuse : it ought at least to be converted, to it's full extent, to the profit of the poor, by a prohibition of the introduction of every article of foreign luxury into France ; for it would be very inhuman in the rich, who engross all the money in the Nation, to send out of it immense sums annually, to the Indies and to China, for the purchase of muslins, silks, and porcelains, which are all to be had within the kingdom. The trade to India and China is necessary only to Nations which have neither mulberry-trees nor silk worms, as the English and Dutch. They too may indulge themselves in the use of tea, because their country produces no wine. But every piece of callico we import from Bengal, prevents an inhabitant of our own islands from cultivating the plant which would have furnished the raw material, and a family in France from spinning and weaving it into cloth. There is another political and moral obligation which ought to be enforced, that of giving back to the female sex the occupations which properly belong to them, such as midwifery, millinery, the employments of the needle, linnen-drapery, trimming, and the like, which require only taste and address, and are adapted to a sedentary way of life, in

order to rescue great numbers of them from idleness, and from prostitution, in which so many seek the means of supporting a miserable existence.

Again, a vast channel of subsistence to the people might be opened, by suppressing the exclusive privileges of commercial and manufacturing companies. These companies, we are told, provide a livelihood for a whole country. Their establishments, I admit, on the first glance, present an imposing appearance, especially in rural situations. They display great avenues of trees, vast edifices, courts within courts, palaces ; but while the undertakers are riding in their coaches, the rest of the village are walking in wooden shoes. I never beheld a peasantry more wretched than in villages where privileged manufacturers are established. Such exclusive privileges contribute more than is generally imagined to check the industry of a country. I shall quote, on this occasion, the remark of an anonymous English Author, highly respectable for the soundness of his judgment, and for the strictness of his impartiality. “I passed,” says he, “through Montreuil, Abbeville, Pequigni.....The second of these cities has likewise its castle : its indigent inhabitants greatly cry up their broad-cloth manufacture : but it is less considerable than those of many villages of the county of York.”*

I could likewise oppose to the woollen manufactures of the villages of the County of York, those of handkerchiefs, cotton-stuffs, woollens, of the villages of the *Pais de Caux*, which are there in a very

* Voyage to France, Italy, and the Islands of the Archipelago, in 1750. Four small volumes in 12mo.

flourishing state, and where the peasantry are very rich, because there are no exclusive privileges in that part of the country. The privileged undertaker having no competitor in a country, settles the workman's wages at his own pleasure. They have a thousand devices besides to reduce the price of labour as low as it can go. They give them, for example, a trifle of money in advance, and having thereby inveigled them into a state of insolvency, which may be done by a loan of a few crowns, they have them thenceforward at their mercy. I know a considerable branch of the salt-water fishery almost totally destroyed, in one of our sea-ports, by means of this underhand species of monopoly. The tradesmen of that town, at first, bought the fish of the fishermen, to cure it for sale. They afterwards were at the expense of building vessels proper for the trade: they proceeded next to advance money to the fishermen's wives, during the absence of their husbands. These were reduced, on their return, to the necessity of becoming hired servants to the merchant, in order to discharge the debt. The merchant having thus become master of the boats, of the fisherman, and of the commodity, regulated the conditions of the trade just as he pleased. Most of the fishermen, disheartened by the smallness of their profits, quitted the employment; and the fishery, which was formerly a mine of wealth to the place, is now dwindled to almost nothing.

On the other hand, if I object to a monopoly which would engross the means of subsistence bestowed by Nature on every order of Society, and on both sexes,

much less would I consent to a monopoly that should grasp at those which she has assigned to every man in particular. For example, the Author of a book, of a machine, or of any invention, whether useful or agreeable, to which a man has devoted his time, his attention, in a word his genius, ought to be at least as well secured in a perpetual right over those who sell his book, or avail themselves of his invention, as a feudal Lord is to exact the rights of fines of alienation, from persons who build on his grounds, and even from those who re-sell the property of such houses. This claim would appear to me still better founded on the natural right, than that of fines of alienation. If the Public suddenly lays hold of a useful invention, the State becomes bound to indemnify the Author of it, to prevent the glory of his discovery from proving a pecuniary detriment to him. Did a law so equitable exist, we should not see a score of booksellers wallowing in affluence at the expense of an Author who did not know, sometimes, where to find a dinner. We should not have seen, for instance, in our own days, the posterity of *Cornille* and of *La Fontaine* reduced to subsist on alms, while the booksellers of Paris have been building palaces out of the sale of their Works.

Immense landed property is still more injurious than that of money and of employments, because it deprives the other citizens, at once, of the social and of the natural patriotism. Besides, it comes in process of time into the possession of those who have the employments and the money ; it reduces all the subjects of the State to dependence upon them, and
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leaves them no resource for subsistence but the cruel alternative, of degrading themselves by a base flattery of the passions of those who have got all the power and wealth in their hands, or of going into exile. These three causes combined, the last especially, precipitated the ruin of the Roman Empire, from the reign of *Trajan*, as *Pliny* has very justly remarked. They have already banished from France more subjects than the revocation of the Edict of Nantes did. When I was in Prussia, in the year 1765, of the hundred and fifty thousand regular troops which the King then maintained, a full third was computed to consist of French deserters. I by no means consider that number as exaggerated, for I myself remarked, that all the soldiers on guard, wherever I passed, were composed, to a third at least, of Frenchmen; and such guards are to be found at the gates of all the cities, and in all the villages on the great road, especially toward the frontier.

When I was in the Russian service, they reckoned near three thousand teachers of language of our nation in the city of Moscow, among whom I knew a great many persons of respectable families, advocates, young ecclesiastics, gentlemen, and even officers. Germany is filled with our wretched compatriots. In the Courts of the South and of the North, what is to be seen but French dancers and comedians? This we have in common at this day with the Italians, and this we had in common with the Greeks of the lower empire. In order to find the means of subsistence, we hunt after a country different from that to which we owe our birth. We do not find the other

nations of Europe in this erratic state, except the Swifs, who trade in the human fpecies, but who all return home after having made their fortune. Our compatriots never return; becaufe the precarious employments which they purfue do not admit of their amaffing the means of a reputable fubfiftence, one day, in their native country.

Men of letters who were never out of their country, or who reflect fuperficially, are constantly exclaiming againft the revocation of the Edict of Nantes. But if they imagine that the reforation of that Edict would bring back to France the pofterity of the French Refugees, they are greatly mifaken. Thofe furely who are rich, and comfortably fettled in foreign countries, will never think of refigning their eftablifhments, and of returning to the country of their fathers: none but *poor* Proteftants therefore would come back. But what fhould they do there, when fo many national Catholics are under the neceffity of emigrating for want of fubfiftence? I have been oftener than once aftonifhed at hearing our pretended politicians loudly re-demanding fo many citizens to religion, while, by their filence, they abandon fuch numbers of them to the infatiable avidity of our great proprietors. The truth ought to be told: they have written rather out of hatred to priefts, than from love to men. The fpirit of tolerance which they wifh to eftablifh, is a vain pretext, with which they conceal their real aim; for the Proteftants whom they are difpofed to récal, are juft as intolerant as they accufe the Catholics of being; of which we had an inftance a few years ago, in the very Land of Liberty,

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in England, where a Roman-Catholic Chapel was burnt down to the ground. Intolerance is a vice of European education, and which manifests itself in literature, in systems, and in puppet-shows. There is a farther reason to be assigned for these clamours : it is the same reason which sets them a-talking for the aggrandizement of commerce, and silences them on the subject of agriculture, which is from it's very nature the most noble of all occupations. It is, since we must speak out, because rich merchants, and great proprietors, give splendid suppers, which are attended by fine women, who build up and destroy reputations at their pleasure, whereas the tillers of the ground, and persons starved into exile, give none. The table is now-a-days the main-spring of the aristocracy of the opulent. By means of this engine it is that an opinion, which may sometimes involve the ruin of a State, acquires preponderancy. There too it is, that the honour of a soldier, of a bishop, of a magistrate, of a man of letters, is frequently blasted by a woman who has forfeited her own.

Modern politics have advanced another very gross error, in alleging that riches always find their level in a state. When the indigent are once multiplied in it to a certain point, a wretched emulation is produced among those poor people, who shall give himself away the cheapest. Whilst, on the one hand, the rich man, teased by his famished compatriots for employment, over-rates the value of his money, the poor, in order to obtain a preference, let down the price of their labour, till at length it becomes inadequate to their subsistence. And then we behold,
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in the best countries, agriculture, manufactures, and commerce, all expire. Consult, for this purpose, the accounts given us of different districts of Italy, and among others what Mr. *Brydone* has advanced, in his very sensible Tour,* notwithstanding the severe strictures of a canon of Palermo, respecting the luxury and extreme opulence of the Sicilian nobility and clergy, and the abject misery of the peasantry; and you will perceive whether money has found it's level in that island or not.

I have been in Malta, which is in no respect comparable, as to fertility of soil, with Sicily; for it consists entirely of one white rock; but that rock is extremely rich in foreign wealth, from the perpetual revenue of the commanderies of the Order of St. John, the capitals of which are deposited in all the Catholic States of Europe, and from the reversions, or spoils, of the Knights who die in foreign countries, and which find their way thither every year. It might be rendered still more opulent by the commodiousness of it's harbour, which is situated the most advantageously of any in the Mediterranean: the peasant is

* I quote a great many books of travels, because, of all literary productions, I love and esteem them the most. I myself have travelled a great deal, and I can affirm with truth, that I have almost always found them agreed, respecting the productions and the manners of every country, unless when warped by national or party spirit. We must however except a small number, whose romantic tone strikes at first sight. They are run down by every body, yet every body consults them. They afford a constant supply of information to Geographers, Naturalists, Navigators, Traders, Political Writers, Philosophers, Compilers on all subjects, Historians of foreign Nations, and even those of our own Country, when they are desirous of knowing the truth.

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there nevertheless in a most miserable condition. His whole clothing consists of drawers, which descend no lower than his knees, and of a shirt without sleeves. He sometimes takes his stand in the great square, his breast, legs, and arms quite naked, and scorched with the heat of the Sun, waiting for a fare, at the rate of one shilling a day, with a carriage capable of holding four persons drawn by a horse, from day-break till midnight; and thus equipped, to attend travellers to any part of the island they think proper, without any obligation on their part to give either him or his beast so much as a draught of water. He conducts his calash, running always bare-footed over the rocks before his horse, which he leads by the bridle, and before the lazy Knight, who hardly ever deigns to speak to him, unless it be to regale him with the appellation of scoundrel; whereas the guide never presumes to make a reply but with cap in hand, and with the address of, Your Most Illustrious Lordship. The treasury of the Republic is filled with gold and silver, and the common people are never paid but in a copper coin called a piece of four tarins, equivalent, in ideal value, to eightpence of our money, and intrinsically worth little more than two farthings. It is stamped with this device, *non æs, sed fides*; “not value, but confidence.” What a difference do exclusive possessions, and gold, introduce between man and man! A grave porter in Holland demands of you in *gout geuldt*, that is, good money, for carrying your portmanteau the length of a street, as much as the humble Maltese Bastiaze receives for carrying you and three of your friends, a whole day together
aroun

around the island. The Dutchman is well clothed, and has his pockets lined with good pieces of gold and silver. His coin presents a very different inscription from that of Malta : you read these words on it : *Concordia res parvæ crescunt* ; “ through concord small things increase.” There is in truth as great a difference between the power and the felicity of one State and another, as between the inscriptions and the substances of their coin.

In Nature it is that we are to look for the subsistence of a people, and in their liberty the channel in which it is to flow. The spirit of monopoly has destroyed many of the branches of it among us, which are pouring in tides of wealth upon our neighbours ; such are, among others, the whale, cod, and herring fisheries. I admit at the same time on the present occasion, that there are enterprizes which require the concurrence of a great number of hands, as well for their preservation and protection, as in order to accelerate their operations, such as the salt-water fisheries : but it is the business of the State to see to the administration of them. No one of our companies has ever been actuated by the patriotic spirit ; they have been associated, if I may be allowed the expression, only for the purpose of forming small particular States. It is not so with the Dutch. For example, as they carry on the herring-fishery to the northward of Scotland, for this fish is always better the farther North you go in quest of it, they have ships of war to protect the fishery. They have others of a very large burthen, called bussès, employed night and day in catching them with the net : and others contrived to sail remarkably

markably fast, which take them on board, and carry them quite fresh to Holland. Besides all this, they have premiums proposed to the vessel which first brings her cargo of fish to market at Amsterdam. The fish of the first barrel is paid at the Stadt-House, at the rate of a golden ducat, or about nine shillings and sixpence a-piece, and those of the rest of the cargo, at the rate of a florin, or one shilling and tenpence each.

This is a powerful inducement to the proprietors of the fishing vessels, to stretch out to the North as far as possible, in order to meet the fish, which are there of a size and of a delicacy of flavour far superior to those which are caught in the vicinity of our coasts. The Dutch erected a statue to the man who first discovered the method of smoking them, and of making what they call red-herring. They thought, and they thought justly, that the citizen who procures for his country a new source of subsistence, and a new branch of commerce, deserves to rank with those who enlighten, or who defend it. From such attentions as these we see with what vigilance they watch over every thing capable of contributing to public abundance. It is inconceivable to what good account they turn an infinite number of productions, which we suffer to run to waste, and this from a soil sandy, marshy, and naturally poor and ungrateful.

I never knew a country in which there was such plenty of every thing. They have no vines in the country, and there are more wines in their cellars than in those of Bourdeaux : they have no forests, and there is more ship-building timber in their dock-yards than

at the fources of the Meufe and of the Rhine, from which their oaks are tranfmitted. Holland contains little or no arable ground, and her granaries contain more Polish corn than that great kingdom referves for the fupport of it's own inhabitants. The fame thing holds true as to articles of luxury ; for though they obferve extreme fimplicity in drefs, furniture, and domeftic economy, there is more marble on fale in their magazines than lies cut in the quarries of Italy and of the Archipelago ; more diamonds and pearls in their caskets than in thofe of the jewellers of Portugal ; and more rofe-wood, Acajou, Sandal, and India canes than there are in all Europe befides, though their own country produces nothing but willows and linden-trees.

The felicity of the inhabitants presents a fpectacle ftill more interefting. I never faw all over the country fo much as one beggar, nor a houfe in which there was a fingle brick or a fingle pane of glafs deficient. But the 'Change of Amfterdam is the great object of admiration. It is a very large pile of building, of an architecture abundantly fimple, the quadrangular court of which is furrounded by a colonnade. Each of it's pillars, and they are very numerous, has it's chapter infcribed with the name of fome one of the principal cities of the World, as Conftantinople, Leghorn, Canton, Peterfburg, Batavia, and fo on ; and is, in propriety of fpeech, the centre of it's commerce in Europe. Of thefe are very few but what every day witneffes tranfactions to the amount of millions. Moft of the good people who there afsemble are drefled in brown, and without ruffles.

ruffles. This contrast appeared to me so much the more striking, that only five days before I happened to be upon the Palais Royal at Paris, at the same hour of the day, which was then crowded with people dressed in brilliant colours, with gold and silver laces, and prating about nothings, the opera, literature, kept mistresses, and such contemptible trifles, and who had not, the greatest part of them at least, a single crown in their pocket which they could call their own.

We had with us a young tradesman of Nantes, whose affairs had been unfortunately deranged, and who had come to seek an asylum in Holland, where he did not know a single person. He disclosed his situation to my travelling companion, a gentleman of the name of *Le Breton*. This Mr. *Le Breton* was a Swiss officer in the Dutch service, half soldier, half merchant, one of the best men living, who first gave him encouragement; and recommended him immediately on his arrival to his own elder brother, a respectable trader, who boarded in the same house where he had fixed. Mr. *Le Breton* the elder carried this unfortunate refugee to the Exchange, and recommended him without ceremony, and without humiliation, to a commercial agent, who simply asked of the young Frenchman a specimen of his handwriting; he then took down his name and address in his pocket-book, and desired him to return next day to the same place at the same hour. I did not fail to observe the assignation in company with him and Mr. *Le Breton*. The agent appeared, and presented my compatriot with a list of seven or eight situations of clerk, in different counting-houses, some of which
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were worth better than thirty guineas a year, beside board and lodging ; others, about sixty pounds without board. He was accordingly settled at once, without farther solicitation. I asked the elder Mr. *Le Breton* whence came the active vigilance of this agent in favour of a stranger, and one entirely unknown to him : He replied ; “ It is his trade ; he “ receives, as an acknowledgment, one month’s salary “ of the person for whom he provides. Do not be “ surpris’d at this,” added he, “ every thing here is “ turned to a commercial account, from an odd old “ shoe up to a squadron of ships.”

We must not suffer ourselves to be dazzled however by the illusions of a prodigious commerce ; and here it is that our politics have frequently misled us. Trade and manufactures, we are told, introduce millions into a State ; but the fine wools, the dye-stuffs, the gold and silver, and the other preparatives imported from foreign countries, are tributes which must be paid back. The people would not have manufactured the less of the wools of the country on their own account ; and if it’s cloths had been of the lowest quality, they would have been at least converted to their use. The unlimited commerce of a country is adapted to a people possessing an ungracious and contracted territory, such as the Dutch ; they export, not their own superfluity, but that of other nations ; and they run no risk of wanting necessaries, an evil which frequently befalls many territorial powers. What does it avail a people to clothe all Europe with their woollens, if they themselves go naked ; to collect the best wines in the World, if they drink nothing but

but water ; and to export the finest of flour, if they eat only bread made of brán ? Examples of such abuses might easily be adduced from Poland, from Spain, and from other countries, which pass for the most regularly governed.

It is in agriculture chiefly that France ought to look for the principal means of subsistence for her inhabitants. Besides agriculture is the great support of morals and religion. It renders marriages easy, necessary, and happy. It contributes toward raising a numerous progeny, which it employs, almost as soon as they are able to crawl, in collecting the fruits of the earth, or in tending the flocks and herds ; but it bestows these advantages only on small landed properties. We have already said, and it cannot be repeated too frequently, that small possessions double and quadruple in a country both crops, and the hands which gather them. Great estates, on the contrary, in the hand of one man, transform a country into vast solitudes. They inspire the wealthy farmers with a relish for city pride and luxury, and with a dislike of country employments. Hence they place their daughters in convents, that they may be bred as ladies, and send their sons to academies, to prepare them for becoming advocates or abbés. They rob the children of the trades-people of their resources ; for if the inhabitants of the country are always pressing toward an establishment in town, those of the great towns never look toward the plains, because they are blighted by tallages and imposts.

Great landed properties expose the State to another dangerous inconvenience, to which I do not believe

that much attention has hitherto been paid. The lands thus cultivated lie in fallow one year at least in three, and in many cases; once every other year. It must happen accordingly; as in every thing left to chance, that sometimes great quantities of such land lie fallow at once, and at other times very little. In those years undoubtedly when the greatest part of those lands is lying fallow, much less corn must be reaped over the kingdom at large than in other years. This source of distress, which has never as far as I know as yet engaged the attention of Government, is one of the causes of that dearth, or unforeseen scarcity of grain; which from time to time falls heavy not on France only, but on the different Nations of Europe.

Nature has parcelled out the administration of agriculture between Man and herself. To herself she has reserved the management of the winds, the rain, the Sun, the expansion of the plants; and she is wonderfully exact in adapting the elements conformably to the seasons: but she has left to Man, the adaptation of vegetables, of soils, the proportions which their culture ought to have to the societies to be maintained by them, and all the other cares and occupations which their preservation, their distribution, and their police demand. I consider this remark as of sufficient importance to evince the necessity of appointing a particular Minister of agriculture*. If it should be found impossible for him to prevent

* There are many other reasons which militate in favour of the appointment of a Minister of Agriculture. The watering canals absorbed by the luxury of the great Lords, or by the commerce of the

prevent chance-combinations in the lands which might be in fallow all at once, he would have it at least in his power to prohibit the transportation of the grain of the country, in those years when the greatest part of the land was in full crop, for it is clear almost to a demonstration, that the following year, the general produce will be so much less, as a considerable proportion of the lands will then of course be in fallow.

Small farms are not subjected to such vicissitudes; they are every year productive, and almost at all seasons. Compare, as I have already suggested, the quantity of fruits, of roots, of pot-herbs, of grass, and of grain annually reaped, and without intermission, on a track of ground in the vicinity of Paris called the *Pré Saint-Gervais*, the extent of which is but moderate, situated besides on a declivity, and exposed to the North, with the productions of an equal portion of ground taken in the plains of the neighbourhood, and managed on the great scale of agriculture; and you will be sensible of a prodigious difference. There is likewise a difference equally striking in the

the great Towns; the puddles and laystalls which poison the villages, and feed perpetual focuses of epidemic disease; the safety of the great roads, and the regulation of the inns upon them; the militia-draughts and imposts of the peasantry; the injustice to which they are in many cases subjected, without daring so much as to complain, these would present to him a multitude of useful establishments which might be made, or of abuses which might be corrected. I am aware that most of these functions are apportioned into divers departments; but it is impossible they should harmonize, and effectually co-operate, till the responsibility attaches to a single individual.

number, and in the moral character of the labouring poor who cultivate them. I have heard a respectable Ecclesiastic declare, that the former class went regularly to confession once a month, and that frequently their confession contained nothing which called for absolution.

I say nothing of the endless variety of delight which results from their labours; from their beds of pinks, of violets, of larks-heel; their fields of corn, of pease, of pulse; their edgings of lilach, of vines, by which the small possessions are subdivided: their stripes of meadow ground displaying alternately opening glades, clumps of willows and poplars discovering through their moving umbrage, at the distance of several leagues, either the mountains melting away into the Horizon, or unknown castles, or the village-spires in the plain, whose rural chimes from time to time catch the ear. Here and there you fall in with a fountain of limpid water, the source of which is covered with an arch enclosed on every side with large slabs of stone; which give it the appearance of an antique monument. I have sometimes read the following innocent inscriptions traced on the stones with a bit of charcoal:

COLIN and COLETTE, *this 8th of March,*

ANTOINETTE and SEBASTIAN, *this 6th of May.*

And I have been infinitely more delighted with such inscriptions than with those of the Academy of Sciences. When the families which cultivate this enchanted spot are scattered about, parents and children, through it's glens, and along it's ridges, while the

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the ear is struck with the distant voice of a country lass singing unperceived, or while the eye is caught by the figure of a lusty young swain, mounted on an apple-tree, with his basket and ladder, looking this way and that way, and listening to the song, like another *Vertumnus*: Where is the park with its statues, its marbles, and its bronzes, once to be compared with it?

O ye rich! who wish to encompass yourselves with elysian scenery, let your park-walls enclose villages blest with rural felicity. What deserted tracks of land over the whole kingdom might present the same spectacle! I have seen Brittany, and other provinces, covered as far as the eye could reach with heath, and where nothing grew but a species of prickly furze, black and yellowish. Our agricultural companies, which there to no purpose employ their large ploughs of new construction, have pronounced those regions to be smitten with perpetual sterility; but these heaths discover, by the ancient divisions of the fields, and by the ruins of old huts and fences, that they have been formerly in a state of cultivation. They are at this day surrounded by farms in a thriving condition, on the self-same soil. How many others would be still more fruitful, such as those of Bourdeaux, which are covered over with great pines! A soil which produces a tall tree is surely capable of bearing an ear of corn.

In speaking of the vegetable order, we have indicated the means of distinguishing the natural analogies of plants with each latitude and each soil. There is actually no soil whatever, were it mere sand,

or mud, on which, through a particular kindness of Providence, some one or other of our domestic plants may not thrive. But the first step to be taken is to re-sow the woods which formerly sheltered those places, now exposed to the action of the winds, whereby the germ of every smaller plant is cankered as it shoots. These means however, and many others of a similar nature, belong not to the jurisdiction of insatiable companies, with their delineations on the great scale, neither are they consistent with provincial imposts and oppression; they depend on the local and patient assiduity of families enjoying liberty, possessing property which they can call their own, not subjected to petty tyrants, but holding immediately of the Sovereign. By such patriotic means as these, the Dutch have forced oaks to grow at Schevelling, a village in the neighbourhood of the Hague, in pure sea-sand, of which I have had the evidence from my own eyes. I repeat an assertion already hazarded: It is not on the face of vast domains, but into the basket of the vintager, and the apron of the reaper, that God pours down from Heaven the precious fruits of the Earth.

These extensive districts of land in the kingdom lying totally useless, have attracted the attention of sordid cupidity; but there is a still greater quantity which has escaped it, from the impossibility of forming such tracks into marquises or seignories; and because likewise the great plough is not at all applicable to them. These are, among others, the stripes by the high-way side, which are innumerable. Our great roads are, I admit, for the most part rendered
productive,

productive, being skirted with elms. The elm is undoubtedly a very useful tree : it's wood is proper for cart-wright's work. But we have a tree which is far preferable to it, because it's wood is never attacked by the insect ; it is excellent for wainscoting, and it produces abundance of very nutritive food : it is the chestnut-tree I mean. A judgment may be formed of the duration and of the beauty of it's wood, from the ancient wainscoting of the market St. Germain, before it was burnt down. The joists were of a prodigious length and thickness, and perfectly sound though more than four hundred years old. The durable quality of this wood may still be ascertained, by examining the wainscoting of the ancient castle of Marcouffi, built in the time of *Charles VI.* about five leagues from Paris. We have of late entirely neglected this valuable tree, which is now allowed to grow only as coppice wood in our forests. It's port however is very majestic, it's foliage beautiful, and it bears such a quantity of fruit, in tiers multiplied one a-top of the other, that no spot of the same extent sown with corn, could produce a crop of subsistence so plentiful.

It must be admitted, as we have seen, in discussing the characters of vegetables, that this tree takes pleasure only in dry and elevated situations ; but we have another adapted to the valleys and humid places, of not much inferior utility, whether we attend to the wood or to the fruit, and whose port is equally majestic : it is the walnut-tree. These beautiful trees would magnificently decorate our great roads. With them might likewise be intermixed other trees pecu-

liar to each district. They would announce to travellers the various provinces of the kingdom: the vine, Burgundy; the apple-tree, Normandy; the mulberry, Dauphiny: the olive, Provence. Their stems loaded with produce, would determine much better than stakes furnished with iron collars, and than the tremendous gibbets of criminal justice, the limits of each province, and the gently diversified feignories of Nature.

It may be objected, that the crops would be gathered by passengers; but they hardly ever touch the grapes in the vineyards which sometimes skirt the highway. Besides if they were to pick the fruit, what harm would be done? When the King of Prussia ordered the sides of many of the great roads through Pomerania to be planted with fruit-trees, it was insinuated to him that the fruit would be stolen: "The people," replied he, "at least, will profit by it." Our cross-roads present perhaps still more lost ground than the great highways. If it is considered, that by means of them the communication is kept up between the smaller cities, towns, villages, hamlets, abbeys, castles, and even single country-houses; that several of them issue in the same place, and that every one must have at least the breadth of a chariot; we shall find the whole space which they occupy to be of incredible magnitude. It would be proper to begin with applying the line to them; for most of them proceed in a serpentine direction, which in many cases adds a full third to their length beyond what is necessary. I acknowledge at the same time, that these sinuosities are highly agreeable, especially
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along the declivity of a hill, over the ridge of a mountain, in rural situations, or through the midst of forests. But they might be rendered susceptible of another kind of beauty, by skirting them with fruit-trees which do not rise to a great height, and which, flying off in perspective, would give a greater apparent extension to the landscape. These trees would likewise afford a shade to travellers. The husbandmen I know allege, that the shade so grateful to passengers, is injurious to their standing corn. They are undoubtedly in the right, as to several sorts of grain; but there are some which thrive better in places somewhat shaded than any where else, as may be seen in the *Pré Saint-Gervais*. Besides, the farmer would be amply indemnified by the wood of the fruit-trees, and by the crops of fruit. The interests even of the husbandman and of the traveller might farther be rendered compatible, by planting only the roads which go from North to South, and the South side of those which run East and West, so that the shade of their trees should scarcely fall on the arable lands.

It would be moreover necessary, in order to increase the national subsistence, to restore to the plough great quantities of land now in pasture. There is hardly such a thing as a meadow in all China, a country so extremely populous. The Chinese sow every where corn and rice, and feed their cattle with the straw. They say it is better that the beasts should live with Man than Man with the beasts. Their cattle are not the less fat for this. The German horses, the most vigorous of animals, feed entirely on straw cut short, with a small mixture of barley or oats. Our farmers
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are every day adopting practices the directly contrary of this economy. They turn, as I have observed in many provinces, a great deal of land which formerly produced corn into small grass-farms, to save the expence of cultivation, and especially to escape the tithe, which their clergy do not receive from pasture-lands. I have seen in Lower-Normandy immense quantities of land, thus forced out of it's natural state, greatly to the public detriment. The following anecdote was told me, on my taking notice of an ancient track of corn-land which had undergone a metamorphosis of this sort. The rector, vexed at losing part of his revenue, without having it in his power to complain, said to the owner of the land, by way of advice: "Master *Peter*, in my opinion, if you would remove the stones from that ground, dung it well, plough it thoroughly, and sow it with corn, you might still raise very excellent crops." The farmer, an arch, shrewd fellow, perceiving the drift of his tithing-man, replied: "You are in the right, good Mr. Rector; if you will take the ground, and do all this to it, I shall ask no more of you than the tithe of the crop."

Our agriculture will never attain all the activity of which it is susceptible unless it is restored to it's native dignity. Means ought therefore to be employed to induce a multitude of easy and idle burghers, who vegetate in our small cities, to go and live in the country. In order to determine them to this, husbandmen ought to be exempted from the humiliating impositions of tallage, of seignorial exactions, and even of those of the militia-service, to which they
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are at present subjected. The state must undoubtedly be served, when necessity requires ; but wherefore affix characters of humiliation to the services which she imposes ? Why not accept a commutation in money ? It would require a great deal, our Politicians tell us. Yes, undoubtedly. But do not our Burgeſſes likewise pay many imposts in our towns, in lieu of those very services ? Besides, the more inhabitants that there are scattered over the country, the lighter will fall the burthen on those who are assessable. A man properly brought up would much rather be touched in his purse, than suffer in his self-love.

By what fatal contradiction have we subjected the greatest part of the lands of France to soccage-tenures, while we have ennobled those of the New World ? The same husbandman who in France must pay tallage, and go with the pick-axe in his hand to labour on the high-road, may introduce his children into the King's Household, provided he is an inhabitant of one of the West-India Islands. This injudicious dispensation of nobility has proved no less fatal to those foreign possessions, into which it has introduced slavery, than to the lands of the Mother-Country, the labourers of which it has drained of many of their resources. Nature invited into the wildernesses of America the overflowings of the European Nations : she had there disposed every thing, with an attention truly maternal, to indemnify the Europeans for the loss of their country. There is no necessity, in those regions, for a man to scorch himself in the Sun while he reaps his grain, nor to be benumbed

benumbed with cold in tending his flocks as they feed, nor to cleave the stubborn earth with the clumsy plough to make it produce aliment for him, nor to rake into it's bowels to extract from thence iron, stone, clay, and the first materials of his house and furniture. Kind Nature has there placed on trees, in the shade, and within the reach of the hand, all that is necessary and agreeable to human life. She has there deposited milk and butter in the nuts of the cocoa-tree; perfumed creams in the apples of the *atte*; table linen and provision in the large fatty leaves, and in the delicious figs, of the banana; loaves ready for the fire in the potatoes, and the roots of the manioc; down finer than the wool of the fleecy sheep in the shell of the cotton plant; dishes of every form in the gourds of the calabasse. She had there contrived habitations, impenetrable by the rain and by the rays of the Sun, under the thick branches of the Indian fig-tree, which rising toward Heaven, and afterwards descending down to the ground where they take root, form by their continued arcades palaces of verdure. She had scattered about, for the purposes at once of delight and of commerce, along the rivers, in the bosom of the rocks, and in the very bed of torrents, the maize, the sugar-cane, the chocolate-nut, the tobacco-plant, with a multitude of other useful vegetables, and from the resemblance of the Latitudes of this New World to that of the different countries of the Old, she promised it's future inhabitants to adopt, in their favour, the coffee-plant, the indigo, and the other most valuable vegetable productions of Africa and of Asia. Wherefore has the
ambition

ambition of Europe inundated those happy climates with the tears and the blood of the human race? Ah! had liberty and virtue collected and united their first planters, how many charms would French industry have added to the natural fecundity of the soil, and to the happy temperature of the tropical regions!

No fogs or excessive heats are there to be dreaded; and though the Sun passes twice a year over their Zenith, he every day brings with him, as he rises above the Horizon, along the surface of the Sea, a cooling breeze which all day long refreshes the mountains, the forests, and the valleys. What delicious retreats might our poor soldiers and possessionless peasants find in those fortunate islands! What expense in garrisons might there have been spared! What petty seignories might there have become the recompense either of gallant officers, or of virtuous citizens! What nurseries of excellent seamen might be formed by the turtle-fishery, so abundant on the shallows surrounding the islands, or by the still more extensive and profitable cod-fishery on the banks of Newfoundland! It would not have cost Europe much more than the expense of the settlement of the first families. With what facility might they have been successively extended to the most remote distances, by forming them, after the manner of the Caribs themselves, one after another, and at the expense of the community! Undoubtedly had this natural progression been adopted, our power would at this day have extended to the very centre of the American Continent, and could have bidden defiance to every attack.

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Government has been taught to believe that the independance of our colonies would be a necessary consequence of their prosperity, and the case of the Anglo-American colonies has been adduced in proof of this. But these colonies were not lost to Great-Britain because she had rendered them too happy ; it was on the contrary because she oppressed them. Britain was besides guilty of a great error, by introducing too great a mixture of strangers among her colonists. There is farther a remarkable difference between the genius of the English and ours. The Englishman carries his country with him wherever he goes : if he is making a fortune abroad, he embellishes his habitation in the place where he has settled, introduces the manufactures of his own Nation into it, there he lives, and there he dies ; or if he returns to his country, he fixes his residence near the place of his birth. The Frenchman does not feel in the same manner : all those whom I have seen in the Islands, always consider themselves as strangers there. During a twenty years residence in one habitation they will not plant a single tree before the door of the house, for the benefit of enjoying it's shade ; to hear them talk, they are all on the wing to depart next year at farthest. If they actually happen to acquire a fortune, away they go, nay frequently without having made any thing, and on their return home settle, not in their native province or village, but at Paris.

This is not the place to unfold the cause of that national aversion to the place of birth, and of that predilection in favour of the Capital ; it is an effect of several moral causes, and among others of education.

tion. Be it as it may, this turn of mind is alone sufficient to prevent for ever the independence of our colonies. The enormous expense of preserving them, and the facility with which they are captured, ought to have cured us of this prejudice. They are all in such a state of weakness, that if their commerce with the Mother-country were to be interrupted but for a few years, they would presently be distressed for want of many articles essentially necessary. It is even singularly remarkable, that they do not manufacture there a single production of the country. They raise cotton of the very finest quality, but make no cloth of it as in Europe; they do not so much as practise the art of spinning it, as the Savages do; nor do they, like them, turn to any account the threads of *pitte*, of those of the banana, or of the leaves of the palmist. The cocoa-tree, which is a treasure to the East-Indies, comes to great perfection in our islands; and scarcely any use is made of the fruit, or of the threaden husk that covers it. They cultivate indigo, but employ it in no process whatever of dying. Sugar then is the only article of produce which is there pursued through the several necessary processes, because it cannot be turned to commercial account till it is manufactured; and after all it must be refined in Europe before it attains a state of full perfection.

We have had, it must be admitted, some seditious insurrections in our Colonies; but these have been much more frequent in their state of weakness than in that of their opulence. It is the injudicious choice of the persons sent thither which has at all times rendered them the seat of discord. How could it be expected

pected that citizens who had disturbed the tranquillity of a long established state of Society, should concur in promoting the peace and prosperity of a rising community? The Greeks and Romans employed the flower of their youth, and their most virtuous citizens, in the plantation of their colonies: and they became themselves kingdoms and empires. Far different is the case with us: bachelor-soldiers, seamen, gownmen, and those of every rank; officers of the higher orders, so numerous and so useless, have filled ours with the passions of Europe, with a rage for fashion, with unprofitable luxury, with corruptive maxims and licentious manners. Nothing of this kind was to be apprehended from our undebauched peasantry. Bodily labour soothes to rest the solitudes of the mind, fixes it's natural restlessness, and promotes among the people health, patriotism, religion, and happiness. But admitting that in process of time these Colonies should be separated from France: Did Greece waste herself in tears when her flourishing Colonies carried her laws and her renown over the coasts of Asia, and along the shores of the Euxine Sea, and of the Mediterranean? Did she take the alarm when they became the stems out of which sprung powerful kingdoms and illustrious republics? Because they separated from her were they transformed into her enemies; and was she not, on the contrary, frequently protected by them? What harm would have ensued had shoots from the tree of France borne lilies in America, and shaded the New World with their majestic branches?

Let the truth be frankly acknowledged, Few men
admitted

admitted to the councils of Princes take a lively interest in the felicity of Mankind. When sight of this great object is lost, national prosperity and the glory of the Sovereign quickly disappear. Our Politicians, by keeping the Colonies in a perpetual state of dependence, of agitation and penury, have discovered ignorance of the nature of Man, who attaches himself to the place which he inhabits only by the ties of the felicity which he enjoys. By introducing into them the slavery of the Negroes, they have formed a connection between them and Africa, and have broken asunder that which ought to have united them to their poor fellow-citizens. They have farther discovered ignorance of the European character, which is continually apprehensive, under a warm climate, of seeing it's blood degraded like that of it's slaves; and which fights incessantly after new alliances with it's compatriots, for keeping up in the veins of those little ones the circulation of the clear, and lively colour of the European blood, and the sentiment of country still more interesting. By giving them perpetually new civil and military rulers, magistrates entire strangers to them, who keep them under a severe yoke; men in a word eager to accumulate fortune, they have betrayed ignorance of the French character, which had no need of such barriers to restrain it to the love of country, seeing it is universally regretting it's productions, it's honours, nay it's very disorders. They have accordingly succeeded neither in forming colonists for America, nor patriots for France; and they have mistaken at once the in-

terests of their Nation, and of their Sovereigns, whom they meant to serve.

I have dwelt the longer on the subject of these abuses, that they are not yet beyond the power of remedy in various respects, and that there are still lands in the New World on which a change may be attempted in the nature of our establishments. But this is neither the time nor the place for unfolding the means of these. After having proposed some remedies for the physical disorders of the Nation, let us now proceed to the moral irregularity which is the source of them. The principal cause is the spirit of division which prevails between the different orders of the State. There are only two methods of cure; the first, to extinguish the motives to division, the second, to multiply and increase the motives to union.

The greatest part of our Writers make a boast of our national spirit of society; and foreigners in reality look upon it as the most sociable in Europe. Foreigners are in the right, for the truth is we receive and caress them with ardor; but our Writers are under a mistake. Shall I venture to expose it? We are thus fond of strangers because we do not love our compatriots. For my own part I have never met with this spirit of union either in families, or in associations, or in natives of the same province; I except only the inhabitants of a single province which I must not name; who as soon as they are got a little from home, express the greatest ardor of affection for each other. But as all the truth must out, it is rather

rather from antipathy to the other inhabitants of the kingdom than from love to their compatriots, for, from time immemorial, that province has been celebrated for intestine divisions. In general, the real spirit of patriotisin, which is the first sentiment of humanity, is very rare in Europe, and particularly among ourselves.

Without carrying this reasoning any farther, let us look for proofs of the fact which are level to every capacity. When we read certain relations of the customs and manners of the Nations of Asia, we are touched with the sentiment of humanity, which among them attracts men to each other, notwithstanding the phlegmatic taciturnity which reigns in their assemblies. If, for example, an Asiatic on a journey stops to enjoy his repast, his servants and camel-driver collect around him, and place themselves at his table. If a stranger happens to pass by, he too sits down with him, and after having made an inclination of the head to the master of the family, and given God thanks, he rises and goes on his way, without being interrogated by any one who he is, whence he comes, or whither he goes. This hospitable practice is common to the Armenians, to the Georgians, to the Turks, to the Persians, to the Siamese, to the Blacks of Madagascar, and to different Nations of Africa and of America. In those countries Man is still dear to Man.

At Paris, on the contrary, if you go into the dining-room of a Tavern, where there are a dozen tables spread, should twelve persons arrive one after another, you see each of them take his place apart at

a separate table, without uttering a syllable. If new guests did not successively come in, each of the first twelve would eat his morsel alone, like a Carthusian monk. For some time a profound silence prevails, till some thoughtless fellow put into good humour by his dinner, and pressed by an inclination to talk, takes upon him to set the conversation a-going. Upon this the eyes of the whole company are drawn toward the orator, and he is measured in a twinkling from head to foot. If he has the air of a person of consequence, that is rich, they give him the hearing. Nay he finds persons disposed to flatter him, by confirming his intelligence, and applauding his literary opinion, or his loose maxim. But if his appearance displays no mark of extraordinary distinction, had he delivered sentiments worthy of a *Socrates*, scarce has he proceeded to the opening of his thesis when some one interrupts him with a flat contradiction. His opponents are contradicted in their turn by other wits who think proper to enter the lists; then the conversation becomes general and noisy. Sarcasms, harsh names, perfidious insinuations, gross abuse, usually conclude the sitting; and each of the guests retires perfectly well-pleased with himself, and with a hearty contempt for the rest.

You find the same scenes acted in our coffee-houses, and on our public walks. Men go thither expressly to hunt for admiration, and to play the critic. It is not the spirit of Society which allures us toward each other, but the spirit of division. In what is called good company matters are still worse managed.

managed. If you mean to be well received you must pay for your dinner at the expense of the family with whom you supped the night before. Nay you may think yourself very well off if it costs you only a few scandalous anecdotes; and if, in order to be well with the husband, you are not obliged to bubble him, by making love to his wife!

The original source of these divisions is to be traced up to our mode of education. We are taught from earliest infancy to prefer ourselves to others, by continued suggestions to be the first among our school-companions. As this unprofitable emulation presents not to far the greatest part of the citizens, any career to be performed on the theatre of the World, each of them assumes a preference from his province, his birth, his rank, his figure, his dress, nay the tutelary saint of his parish. Hence proceed our social animosities, and all the insulting nicknames given by the Norman to the Gascogn, by the Parisian to the Champenois, by the man of family to the man of no family, by the Lawyer to the Ecclesiastic, by the Jansenist to the Molinist, and so on. The man asserts his pre-eminence, especially, by opposing his own good qualities to the faults of his neighbour. This is the reason that slander is so easy, so agreeable, and that it is in general the master-spring of our conversations.

A person of high quality one day said to me, that there did not exist a man, however wretched, whom he did not find superior to himself in respect of some advantage whereby he surpasses persons of our condition, whether it be as to youth, health, talents,

figure, or in short some one good quality or another, whatever our superiority in other respects may be. This is literally true; but this manner of viewing the members of a Society belongs to the province of virtue, and that is not ours. The contrary maxim being equally true, our pride lays hold of that, and finds a determination to it from the manners of the World, and from our very education, which from infancy suggests the necessity of this personal preference.

Our public spectacles farther concur toward the increase of the spirit of division among us. Our most celebrated comedies usually represent tutors cozened by their pupils, fathers by their children, husbands by their wives, masters by their servants. The shows of the populace exhibit nearly the same pictures; and as if they were not already sufficiently disposed to irregularity, they are presented with scenes of intoxication, of lewdness, of robbery, of constables drubbed: these instruct them to under-value at once morals and magistrates. Spectacles draw together the bodies of the citizens, and alienate their minds.

Comedy, we are told, cures vice by the power of ridicule; *castigat ridendo mores*. This adage is equally false with many others which are made the basis of our morality. Comedy teaches us to laugh at another, and nothing more. No one says, when the representation is over, the portrait of this miser has a strong resemblance of myself; but every one instantly discerns in it the image and likeness of his neighbour. It is long since *Horace* made this remark. But on the supposition that a man should perceive himself in the dramatic representation, I do
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not perceive how the reformation of vice would ensue. How could it be imagined that the way for a physician to cure his patient, would be to clap a mirror before his face, and then laugh at him? If my vice is held up as an object of ridicule, the laugh, so far from giving me a disgust at it, plunges me in the deeper. I employ every effort to conceal it; I become a hypocrite: without taking into the account, that the laugh is much more frequently levelled against virtue than against vice. It is not the faithless wife, or profligate son, who is held up to scorn, but the good-natured husband, or the indulgent father. In justification of our own taste we refer to that of the Greeks; but we forget that their idle spectacles directed the public attention to the most frivolous objects; that their stage frequently turned into ridicule the virtue of the most illustrious citizens; and that their scenic exhibitions multiplied among them the aversions and the jealousies which accelerated their ruin.

Not that I would represent laughing as a crime, or that I believe, with *Hobbes*, it must proceed from pride. Children laugh, but most assuredly not from pride. They laugh at sight of a flower, at the sound of a rattle. There is a laugh of joy, of satisfaction, of composure. But ridicule differs widely from the smile of Nature. It is not, like this last, the effect of some agreeable harmony in our sensations, or in our sentiments: but it is the result of a harsh contrast between two objects, of which the one is great the other little; of which the one is powerful and the other feeble. It is remarkably singular that ridicule

is produced by the very same oppositions which produce terror ; with this difference, that in ridicule the mind makes a transition from an object that is formidable to one that is frivolous, and in terror, from an object that is frivolous to one that is formidable. The asp of *Cleopatra* in a basket of fruit ; the fingers of the hand which wrote, amidst the madness of a festivity, the doom of *Belshazzar* ; the sound of the bell which announces the death of *Clarissa* ; the foot of a savage imprinted in a desert island upon the sand, scarce the imagination infinitely more than all the horrid apparatus of battles, executions, massacres and death. Accordingly, in order to impress an awful terror, a frivolous and unimportant object ought to be first exhibited ; and in order to excite excessive mirth, you ought to begin with a solemn idea. To this may be farther added some other contrast, such as that of surprize, and some one of those sentiments which plunge us into infinity, such as that of mystery ; in this case, the soul, having lost it's equilibrium, precipitates itself into terror, or into mirth, according to the arrangement which has been made for it.

We frequently see these contrary effects produced by the same means. For example, if the nurse wants her child to laugh, she shrowds her head in her apron ; upon this the infant becomes serious ; then all at once she shews her face, and he bursts into a fit of laughter. If she means to terrify him, which is but too frequently the case, she first smiles upon the child, and he returns it : then all at once she assumes a serious air, or conceals her face, and the child falls a-crying.

I shall

I shall not say a word more respecting these violent oppositions but shall only deduce this consequence from them, That it is the most wretched part of Mankind which has the greatest propensity to ridicule. Terrified by political and moral phantoms, they endeavour first of all to drown respect for them; and it is no difficult matter to succeed in this: for Nature, always at hand to succour oppressed humanity, has blended in most things of human institution, the effusions of ridicule with those of terror. The only thing requisite is to invert the objects of their comparison. It was thus that *Aristophanes*, by his comedy of *The Clouds*, subverted the religion of his country. Attend to the behaviour of lads at college; the presence of the master at first sets them a-trembling: What contrivance do they employ to familiarize themselves to his idea? They try to turn him into ridicule, an effort in which they commonly succeed to admiration. The love of ridicule in a people is by no means therefore a proof of their happiness, but on the contrary of their misery. This accounts for the gravity of the ancient Romans; they were serious, because they were happy: but their descendants, who are at this day very miserable, are likewise famous for their pasquinades, and supply all Europe with harlequins and buffoons.

I do not deny that spectacles, such as tragedies, may have a tendency to unite the citizens. The Greeks frequently employed them to this effect. But by adopting their dramas we deviate from their intention. Their theatrical representations did not exhibit the calamities of other Nations, but those which they

they themselves had endured, and events borrowed from the History of their own country. Our tragedies excite a compassion whose object is foreign to us. We lament the distresses of the family of *Agamemnon*, and we behold without shedding one tear those who are in the depth of misery at our very door. We do not so much as perceive their distresses, because they are not exhibited on a stage. Our own heroes nevertheless well represented in the theatre, would be sufficient to carry the patriotism of the people to the very height of enthusiasm. What crowds of spectators have been attracted, and what bursts of applause excited, by the heroism of *Eustace Saint-Pierre*, in the Siege of Calais ! The death of *Joan of Arc* would produce effects still more powerful, if a man of genius had the courage to efface the ridicule which has been lavished on that respectable and unfortunate young woman, to whose name Greece would have consecrated altar upon altar.

I will deliver my thoughts on the subject, in a few words, if perhaps it may incite some virtuous man to undertake it. I could wish then without departing from the truth of History, to have her represented at the moment when she is honoured with the favour of her Sovereign, the acclamations of the army, and at the very pinnacle of glory, deliberating on her return to an obscure hamlet, there to resume the employments of a simple shepherdess, unnoticed and unknown. Solicited afterwards by *Dunois*, she determines to brave new dangers in the service of her country. At last, made prisoner in an engagement, she falls into the hands of the English. Interrogated
by

by inhuman judges, among whom are the Bishops of her own Nation, the simplicity and innocence of her replies render her triumphant over the insidious questions of her enemies. She is adjudged by them to perpetual imprisonment. I would have a representation of the dungeon in which she is doomed to pass the remainder of her miserable days, with it's long spiracles, it's iron grates, it's massy arches, the wretched truckle-bed provided for her repose, the cruise of water and the black bread which are to serve her for food. I would draw from her own lips the touchingly plaintive reflections suggested by her condition, on the nothingness of human grandeur, her innocent expressions of regret for the loss of rural felicity; and then the gleams of hope of being relieved by her Prince, extinguished by despair at sight of the fearful abyss which has closed over her head.

I would then display the snare laid for her by her perfidious enemies while she was asleep, in placing by her side the arms with which she had combatted them. She perceives on awakening those monuments of her glory. Hurried away by the passion at once of a woman and of a hero, she covers her head with the helmet, the plume of which had shewn the dispirited French army the road to victory; she grasps with her feeble hands that sword so formidable to the English; and at the instant when the sentiment of her own glory is making her eyes to overflow with tears of exultation, her dastardly foes suddenly present themselves, and unanimously condemn her to the most horrible of deaths. Then it is we should behold a spectacle worthy of the attention of Heaven itself,

itself, virtue conflicting with extreme misery ; we should hear her bitter complaints of the indifference of her Sovereign whom she had so nobly served ; we should see her perturbation at the idea of the horrid punishment prepared for her, and still more at the apprehension of the calumny which is for ever to sully her reputation ; we should hear her, amidst conflicts so tremendous, calling in question the existence of a Providence, the protector of the innocent.

To death at last however walk out she must. At that moment it is I could wish to see all her courage rekindle. I would have her represented on the funeral-pile, where she is going to terminate her days, looking down on the empty hopes with which the World amuses those who serve it ; exulting at the thought of the everlasting infamy with which her death will clothe her enemies, and of the immortal glory which will for ever crown the place of her birth, and even that of her execution. I could wish that her last words, animated by Religion, might be more sublime than those of *Dido*, when she exclaims on the fatal pile :—*Exoriare aliquis nostris ex ossibus ultor*. “Start up some dire avenger from these bones.”

I could wish in a word that this subject, treated by a man of genius, after the manner of *Shakespear*,*
which

* The compliment here paid to *Shakespear* is justly merited ; and how well he could have managed the story of the Maid of Orleans, had he taken the incidents as *St. Pierre* has stated them, and written with the partiality of a Frenchman, may be ascertained by the masterly touches which he actually has bestowed on this distinguished character, in his First Part of *Henry VI*. It may afford some amusement to compare the above prose sketch,
by

which undoubtedly he would not have failed to do had *Joan of Arc* been an English-woman, might be wrought up into a patriotic Drama ; in order that this illustrious

by our Author, with the poetical painting of our own immortal Bard, in the Drama now mentioned. I take the liberty to transcribe only the scene in which the audience is prepared for her entrance, and that in which she actually makes her appearance. For the rest, the Reader is referred to the Play itself.—H. H.

Enter the BASTARD OF ORLEANS to the DAUPHIN, ALENÇON, and REIGNIER.

Bast. Where's the Prince Dauphin? I have news for him.

Dau. Bastard of Orleans, thrice welcome to us.

Bast. Methinks your looks are sad, your cheer appall'd,
Hath the late overthrow wrought this offence?
Be not dismay'd, for succour is at hand:
A holy maid hither with me I bring,
Which, by a vision sent to her from Heaven,
Ordained is to raise this tedious siege,
And drive the English forth the bounds of France.
The spirit of deep prophecy she hath,
Exceeding the nine Sybils of old Rome;
What's past, and what's to come, she can descry.
Speak, shall I call her in? Believe my words,
For they are certain and infallible.

Dau. Go, call her in: But first, to try her skill,
Reignier, stand thou as Dauphin in my place:
Question her proudly, let thy looks be stern;
By this means shall we sound what skill she hath.

Enter JOAN LA PUCELLE.

Reig. Fair maid, is't thou will do these wond'rous feats?

Pucel. Reignier, is't thou that thinkest to beguile me?
Where is the Dauphin?—Come, come from behind;
I know the well, though never seen before.
Be not amazed, there's nothing hid from me:
In private will I talk with thee apart;—
Stand back, you Lords, and give us leave awhile.

Reig.

illustrious shepherdes may become with us the patronesses of War, as Saint *Genevieve* is that of Peace; I would have the representation of her tragedy reserved for the perilous situations in which the State

Reig. She takes upon her bravely at first dash.

Pucel. Dauphin, I am by birth a shepherd's daughter,
My wit untrain'd in any kind of art.
Heaven, and our Lady gracious, hath it pleas'd
To shine on my contemptible estate :
Lo, whilst I waited on my tender lambs,
And to Sun's parching heat display'd my cheeks,
God's Mother deigned to appear to me ;
And, in a vision full of majesty,
Will'd me to leave my base vocation,
And free my country from calamity :
Her aid she promis'd and assur'd success :
In complete glory she reveal'd herself ;
And, whereas I was black and swart before,
With those clear rays which she infus'd on me,
That beauty am I blest with, which you see.
Ask me what question thou canst possible,
And I will answer unpremeditated :
My courage try by combat, if thou dar'st,
And thou shalt find that I exceed my sex.
Resolve on this : Thou shalt be fortunate
If thou receive me for thy warlike mate.

—Assign'd I am to be the English scourge.

This night the siege assuredly I'll raise :
Expect Saint Martin's Summer, halcyon days,
Since I have enter'd thus into these wars.
Glory is like a circle in the water,
Which never ceases to enlarge itself,
'Till by broad spreading it disperse to nought.
With *Henry's* death, the English circle ends ;
Dispersed are the glories it included.
Now am I like that proud insulting ship,
Which *Cæsar* and his fortune bare at once.

might happen to be involved, and then exhibited to the people, as they display, in similar cases, to the people of Constantinople, the standard of *Mahomet*; and I have no doubt that, at sight of her innocence, of her services, of her misfortunes, of the cruelty of her enemies, and of the horrors of her execution, our people, in a transport of fury would exclaim: "War, war with the English!"*

Such means as these, though more powerful than draughts for the militia, and than either pressing or tricking men into the service, are still insufficient to form real citizens. We are accustomed by them to love virtue and our country, only when our heroes are applauded on the theatre. Hence it comes to pass, that the greatest part even of persons of the better sort are incapable of appraising an action till they see it detailed in some journal, or moulded into a drama. They do not form a judgment of it after their own heart, but after the opinion of another; not as it is in reality, and in its own place, but as clothed with imagery, and fitted to a frame. They delight in heroes when they are applauded, powdered and perfumed; but were they to meet with one pouring out his blood in some obscure corner, and perishing

* God forbid I should mean to rouse a spirit of animosity in our people against the English, now so worthy of all our esteem. But as their Writers, and even their Government, have in more instances than one, descended to exhibit odious representations of us on their stage, I was willing to shew them how easily we could make reprisals. Rather, may the genius of *Fenelon* which they prize so highly that one of their most amiable fine writers, Lord *Littleton*, exalts it above that of *Plato*, one day unite our hearts and minds!

in unmerited ignominy, they would not acknowledge him to be a hero. Every one would wish to be the *Alexander* of the opera, but no one the *Alexander* in the city of the Mallians.*

Patriotism ought not to be made too frequently the subject of scenic representation. A heroism ought to be supposed to exist which braves death, but which is never talked of. In order therefore to replace the people, in this respect, in the road of Nature and of Virtue, they should be made to serve as a spectacle to themselves. They ought to be presented with realities and not fictions; with soldiers and not comedians; and if it be impossible to exhibit to them the terrible spectacle of a real engagement, let them see at least a representation of the evolutions and the vicissitudes of one; in military festivals.

The soldiery ought to be united more intimately with the Nation, and their condition rendered more happy. They are but too frequently the subjects of contention in the provinces through which they pass. The spirit of corps animates them to such a degree, that when two regiments happen to meet in the same city, an infinite number of duels is generally the consequence. Such ferocious animosities are entirely unknown in Prussian and Russian regiments, which I consider as in many respects the best troops in Europe. The King of Prussia has contrived to inspire his soldiers, not with the spirit of corps which divides them, but with the spirit of country which unites them. This he has been enabled to accomplish by conferring on them most of the civil employments

* See *Plutarch's Life of Alexander*.

in his kingdom, as the recompense of military services. Such are the political ties by which he attaches them to their country. The Russians employ only one, but it is still more powerful, I mean Religion. A Russian soldier believes that to serve his Sovereign is to serve God. He marches into the field of battle like a neophyte to martyrdom, in the full persuasion that if he falls in it he goes directly to Paradise.

I have heard M. *de Villebois*, Grand Master of the Russian artillery, relate, that the soldiers of his corps, who served in a battery in the affair of Zornedorff, having been mostly cut off, the few who remained seeing the Prussians advance with bayonets fixed, unable to make any farther resistance, but determined not to fly, embraced their guns, and suffered themselves to be all massacred, in order to preserve inviolate the oath which they are called upon to take when received into the artillery, namely never to abandon their cannon. A resistance so pertinacious stripped the Prussians of the victory which they had gained, and made the King of Prussia acknowledge that it was easier to kill the Russians than to conquer them. This heroic intrepidity is the fruit of Religion.

It would be a very difficult matter to restore this power to it's proper elasticity among the French soldiery, who are formed in part of the dissolute youth of our great towns. The Russian and Prussian soldiers are draughted from the class of the peasantry, and value themselves upon their condition. With us on the contrary a peasant is terrified lest his son should be obliged to go for a soldier. Administration on it's

part contributes toward the increase of this apprehension. If there be a single blackguard in a village, the deputy takes care that the black ball shall fall upon him, as if a regiment were a galley for criminals.

I once composed on this subject a memorial which suggested proposals of a remedy for these disorders, and for the prevention of desertion among our soldiers; but like many other things of the same sort it came to nothing. The principal means of reform which I proposed, were a melioration of the condition of the soldiery, as in Prussia, by holding up the prospect of civil employments. These with us are infinite in number; and, in order to prevent the irregularities into which they are thrown by a life of celibacy, I proposed to grant them permission to marry, as most of the Russian and Prussian soldiers do.* This me-

* I could likewise wish that the wives of sailors might be permitted to go to sea with their husbands; they would prevent on ship-board more than one species of irregularity. Besides they might be usefully engaged in a variety of employments suitable to their sex, such as dressing the victuals, washing the linen, mending the sails, and the like.....They might in many cases co-operate in the labours of the ship's crew. They are much less liable to be affected by the scurvy, and by various other disorders, than men are.

The project of embarking women will no doubt appear extravagant to persons who do not know that there are, at least, ten thousand women who navigate the coasting vessels of Holland; who assist on deck in working the ship, and manage the helm as dextrously as any man. A handsome woman would undoubtedly prove the occasion of much mischief on board a French ship; but women, such as I have been describing, hardy and laborious, are exceedingly proper on the contrary to prevent or remedy many kinds of mischief, which are already but too prevalent in a sea life.

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thod, so much adapted to the reformation of manners, would farther contribute toward conciliating our provinces to each other, by the marriages which regiments would contract in their continual progress from place to place. They would strengthen the bands of national affection from North to South; and our peasantry would cease to be afraid of them, if they saw them marching through the country as husbands and fathers. If the soldiery are sometimes guilty of irregularities, to our military institutions the blame must be imputed. I have seen others under better discipline, but I know of none more generous.

I was witness to a display of humanity on their part, of which I doubt whether any other soldiery in Europe would have been capable. It was in the year 1760, in a detachment of our army then in Germany, and an enemy's country, encamped hard by an inconsiderable city called Stadberg. I lodged in a miserable village occupied by the head-quarters. There were in the poor cottage where I and two of my comrades had our lodgings, five or six women, and as many children, who had taken refuge there, and who had nothing to eat, for our army had foraged their corn, and cut down their fruit-trees. We gave them some of our provisions; but what we could spare was a small matter indeed, considering both their numbers and their necessities. One of them was a young woman big with child, who had three or four children beside. I observed her go out every morning, and return some hours after, with her apron full of slices of brown bread. She strung them on packthreads, and dried them in the chimney like

mushrooms. I had her questioned one day by a servant of ours, who spoke German and French, where she found that provision, and why she put it through that process. She replied that she went into the camp to solicit alms among the soldiers ; that each of them gave her a piece of his ammunition-bread, and that she dried the slices in order to preserve them ; for she did not know where to look for a supply after we were gone, the country being utterly desolated.

A soldier's profession is a perpetual exercise of virtue, from the necessity to which it constantly subjects the man to submit to privations innumerable, and frequently to expose his life. It has Religion therefore for its principal support. The Russians keep up the spirit of it in their national troops, by admitting among them not so much as one foreign soldier. The King of Prussia on the contrary has accomplished the same purpose by receiving into his soldiers of every religion ; but he obliges every one of them exactly to observe that which he has adopted. I have seen, both at Berlin and at Potsdam, every Sunday morning, the officers mustering their men on the parade about eleven o'clock, and then filing off with them in separate detachments, Calvinists, Lutherans, Catholics, every one to his own church, to worship God in his own way.

I could wish to have abolished among us the other causes of division, which lay one citizen under the temptation, that he may live himself, to wish the hurt or the death of another. Our politicians have multiplied without end these sources of hatred, nay have rendered

rendered the State an accomplice in such ungracious sentiments, by the establishment of lotteries, of tontines, and of annuities. "So many persons," say they, "have died this year; the State has gained so much." Should a pestilence come, and sweep off one half of the people, the State would be wonderfully enriched! Man is nothing in their eyes; gold is all in all. Their art consists in reforming the vices of Society by violences offered to Nature: and what is passing strange, they pretend to act after her example. "It is her intention," they gravely tell you, "that every species of being should subsist only by the ruin of other species. Particular evil is general good." By such barbarous and erroneous maxims are Princes misled. These Laws have no existence in Nature, except between species which are opposite and inimical. They exist not in the same species of animals, which live together in a state of Society. The death of a bee most assuredly never tended to promote the prosperity of the hive. Much less still can the calamity and death of a man be of advantage to his Nation, and to Mankind, the perfect happiness of which must consist in a complete harmony between it's members. We have demonstrated in another place, that it is impossible the slightest evil should befall a single individual, without communicating the impression of it to the whole body politic.

Our rich people entertain no doubt that the good things of the lower orders will reach them, as they enjoy the productions of the arts which the poor cultivate; but they participate equally in the ills which

the poor suffer, let them take what precautions they will to secure themselves. Not only do they become the victims of their epidemical maladies, and of their pillage, but of their moral opinions, which are ever in a progress of depravation in the breasts of the wretched. They start up like the plagues which issued from the box of *Pandora*, and in defiance of armed guards, force their way through fortresses and castle-walls, and fix their residence in the heart of tyrants. In vain do they dream of personal exemption from the ills of the vulgar; their neighbours catch the infection, their servants, their children, their wives, and impose the necessity of abstinence from every thing, in the very midst of their enjoyments.

But when, in a Society, particular bodies are constantly converting to their own profit the distresses of others, they perpetuate these very distresses, and multiply them to infinity. It is a fact easily ascertained, that wherever advocates and physicians peculiarly abound, law-suits and diseases there likewise are found in uncommon abundance. Though there be among them men of the best dispositions, and of the soundest intellect, they do not set their faces against irregularities which are beneficial to their corps.

These inconveniences are by no means desperate; I am able to quote instances to this effect which no sophistry can invalidate. On my entering into the service of Russia, the first month's revenue of my place was stopped, as a complete indemnification for the expense attending the treatment of every kind of malady with which I might be attacked; and this included, together with myself, my servants, and my family,

family, if I should happen to marry ; and extended to every possible expense of Physician, Surgeon and Apothecary. There was farther stopped for the same object, a small sum, amounting to one, or one and a half per cent. of my appointments : this was to have been paid annually ; and every step higher I might have risen I was to have given an additional month's pay of that superior rank. This is the complete amount of the tax upon officers, in consideration of which they and their families are entitled to every kind of medical advice and assistance, under whatever indisposition.

The Physicians and Surgeons of every corps have at the same time a sufficiently ample revenue arising from these payments. I recollect that the Physician of the corps in which I served had an annual income of a thousand roubles, or five thousand livres (about two hundred guineas), and little or nothing to do for it ; for as our maladies brought him nothing they were of very short duration. As to the soldiers, if my recollection is accurate, they are medically treated without any defalcation of their pay. The grand Dispensary belongs to the Emperor. It is in the city of Moscow, and consists of a magnificent pile of building. The medicines are deposited in vases of porcelain, and are always of the very best quality. They are thence distributed over the rest of the Empire at a moderate price, and the profit goes to the Crown. There is not the slightest ground to apprehend imposition in the conduct of this business. The persons employed in the preparation and distribution are men of ability, who have no kind of interest

rest in adulterating them, and who, as they rise in a regular progression of rank and salary, are actuated with no emulation but that of discharging their duty with fidelity.*

The example of *Peter* the Great challenges imitation ; and the order which he has established among his troops, with respect to Physicians and Apothecaries, might be extended all over the kingdom, not only in the line of the medical profession, though even this would bring an immense increase of revenue to the State, but might also be usefully applied to the profession of the Law. It is greatly to be wished that Attorneys, Advocates, and Judges were paid by the

* The insatiable thirst of gold and luxury might be allayed in the greatest part of our citizens, by presenting them with a great number of these political perspectives. They constitute the charm of petty conditions, by displaying to them the attractions of infinity, the sentiment of which, as we have seen, is so natural to the heart of Man. It is by means of these, that mechanics and small shopkeepers are much more powerfully attached, by moderate profits, to their contracted spheres, enlivened by hope, than the rich and great are to lofty situations, the term of which is before them. The process which passes in the head of the little, is something similar to the milk-maid's train of thought in the fable. With the price of this milk I will buy eggs ; eggs will give me chicks ; those chicks will grow up to hens ; I will sell my poultry, and buy a lamb, and so on. The pleasure which they enjoy, in pursuing those endless progressions, is the sweet illusion that carries them through their labours ; and it is so real, that when they happen to accumulate a fortune, and are able to live in ease and affluence, their health gradually declines, and most of them terminate their days in languor and melancholy. Modern Politicians, revert then to Nature ! The sweetest music is not emitted from flutes made of gold and silver, but from those which are constructed of simple reeds.

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State, and scattered over the whole kingdom not for the purpose of arguing causes, but of settling them by reference. These arrangements might be extended to all descriptions of profession which subsist on the distress of the Public: then the whole body of the citizens, finding their repose and their fortune in the happiness of the State, would exert themselves to the uttermost to maintain it.

These causes, and many others, divide among us all the different classes of the Nation. There is not a single province, city, village, but what distinguishes the province, city, village next to it, by some injurious and insulting epithet. The same remark applies to the various ranks and conditions of Society. *Divide & impera*, Divide and govern, say our modern Politicians. This maxim has ruined Italy the country from whence it came. The opposite maxim contains much more truth. The more united citizens are the more powerful and happy is the Nation which they compose. At Rome, at Sparta, at Athens, a citizen was at once advocate, senator, pontiff, edile, husbandman, warrior, and even seaman. Observe to what a height of power those republics advanced. Their citizens were however far inferior to us in respect of general knowledge, but they were instructed in two great Sciences of which we are ignorant, namely the love of the Gods, and of their Country. With these sublime sentiments they were prepared for every thing. Where they are wanting Man is good for nothing. With all our encyclopedic literature, a great man with us, even in point of talents, would be but the fourth part at most of a Greek or a Roman.

a Roman. He would distinguish himself much more in supporting the honour of his particular profession, but very little in maintaining the honour of his country.

It is our wretched political constitution which produces in the State so many different centres. There was a time when we talked of our being republicans. Verily if we had not a King we should live in perpetual discord. Nay how many Sovereigns do we make of one single and lawful Monarch ! Every corps has it's own, who is not the Sovereign of the Nation. How many projects are formed, and defeated, in the King's name ! The King of the waters, and of the forests, is at variance with the King of the bridges and highways. The King of the colonies sanctions a plan of improvement, the King of the finances refuses to advance the money. Amidst these various conflicts of paramount authority, nothing is executed. The real King, the King of the People, is not served.

The same spirit of division prevails in the Religion of Europe. What mischief has not been practised in the name of God ! All acknowledge the One Supreme Being, who created the Heavens and the Earth, and Man ; but each kingdom has it's own, who must be worshipped according to a certain ritual. To this God it is that each Nation in particular offers thanksgiving, on occasion of every battle. In his name it was that the poor Americans were exterminated. The God of Europe is clothed with terror, and devoutly adored. But where are the altars of the God of Peace, of the Father of Mankind, of Him
who

who proclaims the glad tidings of the Gospel? Let our modern Politicians trumpet their own applause on the happy fruits of those divisions, and of an education dictated by ambition. Human life, so fleeting and so wretched, passes away in this unremitting strife; and while the Historians of every Nation, well paid for their trouble, are extolling to Heaven the victories of their Kings and of their Pontiffs, the People are addressing themselves, in tears, to the God of the Human Race, and asking of Him the way in which they ought to walk, in order to reach his habitation at length, and to live a life of virtue and happiness upon the earth.

The cause of the ills which we endure, I repeat it, is to be found in our vain-glorious Education; and in the wretchedness of the commonalty, which communicates a powerful influence to every new opinion, because they are ever expecting from novelty some mitigation of the pressure of inveterate woes. But as soon as they perceive that their opinions become tyrannical, in their turn, they presently renounce them: and this is the origin of their levity. Whenever they can find the means of living in ease and abundance they will be no longer subject to these vicissitudes, as we have seen in the instance of the Dutch, who print and sell the theological, political, and literary controversies of all Europe, without being themselves in the least affected, as to their civil and religious opinions; and when our public education shall be reformed, the people will enjoy the happy and uninterrupted tranquillity of the Nations of Asia.

Before I proceed to suggest my ideas on this subject, I take the liberty to propose some other means of general union. I shall consider myself as amply recompensed for the labour which my researches have cost me, if so much as a single one of my hints of reform shall be adopted.

OF PARIS.

It has already been observed that few Frenchmen are attached to the place of their birth. The greatest part of those who acquire fortune in foreign countries, on their return, settle at Paris. This upon the whole is no great injury to the State. The slighter their attachment to their Country, the easier it is to fix them at Paris. One single point of union is necessary to a great Nation. Every country which has acquired celebrity by its patriotism, has likewise fixed the centre of it in their Capital, and frequently in some particular monument of that Capital; the Jews had theirs at Jerusalem, and its Temple; the Romans, theirs at Rome, and the Capitol; the Lacedemonians, theirs at Sparta, and in citizenship.

I am fond of Paris. Next to a rural situation, and a rural situation such as I like, I give Paris the preference to any thing I have ever seen in the World. I love that city not only on account of its happy situation, because all the accommodations of human life are there collected, from its being the centre of all the powers of the kingdom, and for the other reasons which made *Michael Montaigne* delight in it, but because it is the asylum and the refuge of the miserable. There it is that the provincial ambitions, prejudices, aversions,

aversions, and tyrannies, are lost and annihilated. There a man may live in obscurity and liberty. There it is possible to be poor without being despised. The afflicted person is there decoyed out of his misery by the public gaiety; and the feeble there feels himself strong in the strength of the multitude. Time was when, on the faith of our political Writers, I looked upon that city as too great. But I am now far from thinking that it is of sufficient extent, and sufficiently majestic, to be the capital of a kingdom so flourishing.

I could wish that, our sea-ports excepted, there were no city in France but Paris; that our provinces were covered only with hamlets, and villages, and sub-divided into small farms; and that, as there is but one centre in the kingdom, there might likewise be but one Capital. Would to God it were that of all Europe, nay of the whole Earth; and that, as men of all Nations bring thither their industry, their passions, their wants, and their misfortunes, it should give them back, in fortune, in enjoyment, in virtues, and in sublime consolations, the reward of that asylum which they resort thither to seek!

Of a truth our mind, illuminated as it is at this day with such various knowledge, wants the nobly comprehensive grasp which distinguished our forefathers. Amidst their simple and Gothic manners, they entertained the idea, I believe, of rendering it the Capital of Europe. The traces of this design are visible in the names which most of their establishments bear, such as the Scottish College, the Irish, that of the Four Nations; and in the foreign names of the Royal household-troops. Behold that noble monument

monument of antiquity, the church of Notre-Dame, built more than six hundred years ago, at a time when Paris did not contain the fourth part of the inhabitants with which it is now peopled ; it is more vast, and more majestic than any thing of the kind which has been since reared. I could wish that this spirit of *Philip* the August, a Prince too little known in our frivolous age, might still preside over it's establishments, and extend the use of them to all Nations. Not that but men of every Nation are welcome there, for their money ; our enemies themselves may live quietly in it, in the very midst of war, provided they are rich ; but above all, I could wish to render her good and propitious to her own children. I do not know of any advantage which a Frenchman derives from having been born within her walls, unless it be, when reduced to beggary, that of having it in his power to die in one of her hospitals. Rome bestowed very different privileges on her citizens ; the most wretched among them there enjoyed privileges and honours more ample than were communicated even to Kings, in alliance with the Republic.

It is pleasure which attracts the greatest part of strangers to Paris ; and if we trace those vain pleasures up to their source, we shall find that they proceed from the misery of the People, and from the easy rate at which it is there possible to procure girls of the town, spectacles, modish finery, and the other productions which minister to luxury. These means have been highly extolled by modern politicians. I do not deny that they occasion a considerable influx of money into a country ; but at the long run, neighbouring

bouring nations imitate them ; the money of strangers disappears, but their debauched morals remain. See what Venice has come to, with her mirrors, her pomatums, her courtezans, her masquerades, and her carnival. The frivolous arts on which we now value ourselves have been imported from Italy, whose feebleness and misery they this day constitute.

The noblest spectacle which any Government can exhibit is that of a people laborious, industrious and content. We are taught to be well-read in books, in pictures, in algebra, in heraldry, and not in men. Connoisseurs are rapt with admiration at sight of a Savoyard's head painted by *Greuze* ; but the Savoyard himself is at the corner of the street, speaking, walking, almost frozen to death, and no one minds him. That mother with her children around her form a charming group ; the picture is invaluable : the originals are in a neighbouring garret without a farthing whereupon to subsist. Philosophers ! ye are transported with delight, and well you may, in contemplating the numerous families of birds, of fishes, and of quadrupeds, the instincts of which are so endlessly varied, and to which one and the same Sun communicates life. Examine the families of men of which the inhabitants of the Capital consist, and you would be disposed to say, that each of them had borrowed it's manners, and it's industry, from some species of animal ; so varied are their employments.

Walk out to yonder plain at the entrance of the city ; behold that general officer mounted on his prancing courser : he is reviewing a body of troops :
see,

fee, the heads, the shoulders, and the feet of his soldiers, arranged in the same straight line ; the whole embodied corps has but one look, one movement. He makes a sign, and in an instant a thousand bayonets gleam in the air ; he makes another, and a thousand fires start from that rampart of iron. You would think, from their precision, that a single fire had issued from a single piece. He gallops round those smoke-covered regiments, at the sound of drums and fifes, and you have the image of *Jupiter's* eagle armed with the thunder, and hovering round Etna. A hundred paces from thence, behold an insect among men. Look at that puny chimney-sweeper, of the colour of soot, with his lantern, his cymbal, and his leathern greaves : he resembles a black-beetle. Like the one which in Surinam is called the lantern-bearer, he shines in the night, and moves to the sound of a cymbal. This child, those soldiers, and that general are equally men ; and while birth, pride, and the demands of social life establish infinite differences among them, Religion places them on a level : she humbles the head of the mighty, by shewing them the vanity of their power ; and she raises up the head of the unfortunate, by disclosing to them the prospects of immortality : she thus brings back all men to the equality which Nature had established at their birth, and which the order of Society had disturbed.

Our Sybarites imagine they have exhausted every possible mode of enjoyment. Our moping, melancholy old men consider themselves as useless to the World ; they no longer perceive any other perspective before them but death. Ah ! paradise and life
are

are still upon the earth for him who has the power of doing good.

Had I been blessed with but a moderate degree of fortune, I would have procured for myself an endless succession of new enjoyments. Paris should have become to me a second *Memphis*. It's immense population is far from being known to us. I would have had one small apartment in one of it's suburbs, adjoining to the great road; another at the opposite extremity, on the banks of the Seine, in a house shaded with willows and poplars; another in one of it's most frequented streets; a fourth in the mansion of a gardener, surrounded with apricot-trees, figs, coleworts, and lettuces; a fifth in the avenues of the city, in the heart of a vineyard, and so on.

It is an easy matter undoubtedly to find every where lodgings of this description, and at an easy rate; but it may not be so easy to find persons of probity for hosts and neighbours. There is it must be admitted much depravity among the lower orders; but there are various methods which may be employed to find out such as are good and honest; and with them I commence my researches after pleasure. A new *Diogenes*, I am set out in search of men. As I look only for the miserable, I have no occasion to use a lantern. I get up at day-break, and step to partake of a first mass, into a church still but half illuminated by the day-light: there I find poor mechanics come to implore God's blessing on their day's labour. Piety, exalted above all respect to Man, is one assured proof of probity: cheerful submission to labour is another. I perceive, in raw and rainy wea-

ther a whole family squat on the ground, and weeding the plants of a garden :* here again are good people. The night itself cannot conceal virtue. Toward midnight, the glimmering of a lamp announces to me, through the aperture of a garret, some poor widow prolonging her nocturnal industry, in order to bring up by the fruits of it her little ones who are sleeping around her. These shall be my neighbours and my hosts. I announce myself to them as a wayfaring man, as a stranger, who wishes to breathe a little in that vicinity. I beseech them to accommodate me with part of their habitation, or to look out for an apartment that will suit me in the neighbourhood. I offer a good price, and am domesticated presently.

I am carefully on my guard, in the view of securing the attachment of those honest people, against giving them money for nothing, or by way of alms ; I know of means much more honourable to gain their friendship. I order a greater quantity of provision than is necessary for my own use, and the overplus turns to account in the family ; I reward

* Persons employed in the culture of vegetables are in general a better sort of people. Plants have their theology impressed upon them. I one day however fell in with a husbandman who was an atheist. It is true he had not picked up his opinions in the fields, but from books. He seemed to be exceedingly well satisfied with his attainments in knowledge. I could not help saying to him at parting : “ You have really gained a mighty point, in
“ employing the researches of your understanding to render your-
“ self miserable !”

In the hypothetical examples hereafter adduced, there is scarcely any one article of invention merely, except the good which I did not do.

the children for any little services which they render me: I carry the whole household, of a holiday into the country, and sit down with them to dinner upon the grass; the father and mother return to town in the evening well refreshed, and loaded with a supply for the rest of the week. On the approach of Winter, I clothe the children with good woollen stuffs, and their little warmed limbs bless their benefactor, because my haughty vain-glorious bounty has not frozen their heart. It is the godfather of their little brother who has made them a present of the clothes. The less closely you twist the bands of gratitude, the more firmly do they contract of themselves.

I enjoy not only the pleasure of doing good, and of doing it in the best manner, I have the farther pleasure of amusing and instructing myself. We admire in books the labours of the artisan, but books rob us of half our pleasure, and of the gratitude which we owe them. They separate us from the People, and they impose upon us, by displaying the arts with excessive parade, and in false lights, as subjects for the theatre, and for the magic-lantern. Besides there is more knowledge in the head of an artisan than in his art, and more intelligence in his hands than in the language of the Writer who translates him. Objects carry their own expression upon them: *Rem verba sequuntur* (words follow things.) The man of the commonalty has more than one way of observing and of feeling, which is not a matter of indifference. While the Philosopher rises as high into the clouds as he possibly can, the other keeps contentedly at the bottom of the valley, and beholds very different per-

speculatives in the World. Calamity forms him at the length as well as another man. His language purifies with years ; and I have frequently remarked that there is very little difference, in point of accuracy, of perspicuity, and of simplicity, between the expressions of an aged peasant and of an old courtier. Time effaces from their several styles of language, and from their manners, the rusticity and the refinement which Society had introduced. Old-age, like infancy, reduces all men to a level, and gives them back to Nature.

In one of my encampments, I have a landlord who who has made the tour of the Globe. He has been seaman, soldier, buccanier. He is sagacious as *Ulysses*, but more sincere. When I have placed him at table with me, and made him taste my wine, he gives me a relation of his adventures. He knows a multitude of anecdotes. How many times was he on the very point of making his fortune, but failed ! He is a second *Ferdinand Mendez Pinto*. The upshot of all is, he has got a good wife and lives contented.

My landlord, in another of my stations, has lived a very different life ; he scarcely ever was beyond the walls of Paris, and but seldom beyond the precinct of his shop. But though he has not travelled over the World, he has not missed his share of calamity by staying at home. He was very much at his ease ; he had laid up, by means of his honest savings, fifty good Louis d'or, when one night his wife and daughter thought proper to clope, carrying his treasure with them. He had almost died with vexation. Now, he says, he thinks no more about it ; and cries

as he tells me the story. I compose his mind by talking kindly to him ; I give him employment ; he tries to dissipate his chagrin by labour ; his industry is an amusement to me : I sometimes pass complete hours in looking at him, as he bores, and turns, pieces of oak as hard as ivory.

Now and then I stop in the middle of the city before the shop of a smith ; and then I am transformed into the Lacedemonian *Liches*, at Tegeum, attending to the processes of forging and hammering iron. The moment that the man perceives me attentive to his work, I will soon acquire his confidence. I am not, as *Liches* was, looking for the tomb of *Orestes* ;* but I have occasion to employ the art of a smith if not for myself, for the benefit of some one else. I order this honest fellow to manufacture for me some solid articles of household furniture, which I intend to bestow as a monument to preserve my memory in some poor family. I wish besides to purchase the friendship of an artificer ; I am perfectly sure that the attention which he sees I pay to his work, will induce him to exert his utmost skill in executing it. I thus hit two marks with one stone. A rich man, in similar circumstances, would give alms, and confer no obligation on any one.

J. J. Rousseau told me a little anecdote of himself, relative to the subject in hand. “ One-day,” said he, “ I happened to be at a village-festival, in a gentleman’s country seat not far from Paris. After dinner the company betook themselves to walking up and down the fair, and amused themselves with

* See *Herodotus*, book i.

“ throwing pieces of small money among the peasantry, to have the pleasure of seeing them scramble and fight in picking them up. For my own part, following the bent of my solitary humour, I walked apart in another direction. I observed a little girl selling apples, displayed on a flat basket, which she carried before her. To no purpose did she extol the excellence of her goods; no customer appeared to cheapen them. How much do you ask for all your apples, said I to her?—All my apples? replied she, and at the same time began to reckon with herself.—Threepence, Sir, said she.—I take them at that price, returned I, on condition you will go and distribute them among these little Savoyards whom you see there below: this was instantly executed. The children were quite transported with delight at this unexpected regale, as was likewise the little merchant at bringing her wares to so good a market. I should have conferred much less pleasure on them had I given them the money. Every one was satisfied and no one humbled.” The great art of doing good consists in doing it judiciously. Religion instructs us in this important secret, in recommending to us to do to others what we wish should be done to us.

I sometimes betake myself to the great road, like the ancient Patriarchs, to do the honours of the City to strangers who may happen to arrive. I recollect the time when I myself was a stranger in strange lands, and the kind reception which I met with when far from home. I have frequently heard the nobility of Poland and Germany complain of our grandees. They

They allege that French travellers of distinction are treated in these countries with unbounded hospitality and attention ; but that they, on visiting France in their turn, are almost entirely neglected. They are invited to one dinner on their arrival, and to another when preparing to depart : and this is the whole amount of our hospitality. For my own part, incapable of acquitting the obligations of this kind which I lie under to the Great of foreign countries, I repay them to their commonalty.

I perceive a German travelling on foot ; I accost him, I invite him to stop and take a little repose at my habitation. A good supper and a glass of good wine dispose him to communicate to me the occasion of his journey. He is an officer ; he has served in Prussia and in Russia ; he has been witness to the partition of Poland. I interrupt him to make my enquiries after Marechal Count *Munich*, the Generals *de Villebois* and *du Bosquet*, the Count *de Munichio*, my friend *M. de Taubenheim*, Prince *Xatorinski*, Field Marechal of the Polish Confederation, whose prisoner I once was. Most of them are dead, he tells me ; the rest are superannuated, and retired from all public employment. Oh ! how melancholy it is, I exclaim, to travel from one's country, and to make acquaintance with estimable men abroad whom we are never to see more ! Oh ! how rapid a career is human life ! Happy the man who has it in his power to employ it in doing good ! My guest favours me with a short detail of his adventures : to these I pay the closest attention, from their resemblance to my own. His leading object was to deserve well of his

fellow creatures, and he has been rewarded by them with calumny and persecution. He is under misfortunes ; he has come to France to put himself under the Queen's protection : he hopes a great deal from her goodness. I confirm his hopes, by the idea which public opinion has conveyed to me of the character of that Princess, and by that which Nature has impressed on her physiomy. I am pouring the balm of consolation, he tells me, into his heart. Full of emotion he presses my hand. My cordial reception of him is a happy presage of the rest ; he could have met with nothing so friendly even in his own country. Oh ! what pungent sorrow may be soothed to rest by a single word, and by the feeblest mark of benevolence !

I remember that one day I found, not far from the iron-gate de Caillot, at the entrance into the Elysian Fields, a young woman sitting with a child in her lap, on the brink of a ditch. She was handsome, if that epithet may be applied to a female overwhelmed in melancholy. I walked into the sequestered alley where she had taken her station ; the moment that she perceived me she looked the other way : her timidity and modesty fixed my eyes on her. I remarked that she was very decently dressed, and wore very white linen ; but her gown and neck handkerchief were so completely darned over, that you would have said the spiders had spun the threads. I approached her with the respect which is due to the miserable ; I bowed to her, and she returned my salute with an air of gentility, but with reserve. I then endeavoured to engage her in conversation by talking
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of the wind and the weather : her replies consisted of monosyllables only. At length I ventured to ask if she had come abroad for the pleasure of enjoying a walk in the country : upon this she began to sob and weep without uttering a single word. I sat down by her, and insisted, with all possible circumspection, that she would disclose to me the cause of her distress. She said to me ; “ Sir, my husband has just “ been involved in a bankruptcy at Paris, to the “ amount of five thousand livres (£.208 6s. 8d.) ; I “ have been giving him a convoy as far as Neuilly : “ he is gone, on foot, a journey of sixty leagues hence, “ to try to recover a little money which is due to us. “ I have given him my rings and all my other little “ trinkets, to defray the expence of his journey ; and “ all that I have left in the world, to support myself “ and my child, is a single shilling piece.”—“ What “ parish do you belong to, Madam ?” said I.—“ St. Eustache,” replied she.—“ The Rector,” I subjoined, “ passes for a very charitable, good man.”—“ Yes, Sir,” said she, “ but you need not be informed, that there is no charity in parishes for us “ miserable Jews.” At these words, her tears began to flow more copiously, and she arose to go on her way. I tendered her a small pittance toward her present relief, which I besought her to accept at least as a mark of my good-will. She received it, and returned me more reverences and thanks, and loaded me with more benedictions, than if I had re-established her husband’s credit. How many delicious banquets might that man enjoy who would this way lay out three or four hundred pounds a year !

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My different establishments, scattered over the Capital and the vicinity, variegate my life most innocently and most agreeably. In Winter, I take up my residence in that which is exposed completely to the noon-day Sun ; in Summer, I remove to that which has a northern aspect, and hangs over the cooling stream. At another time, I pitch my tent in the neighbourhood of the Rue d'Artois, among piles of hewn stone, where I see palaces rising around me, pediments decorated with sphynxes, domes, kiosques. I take care never to enquire to whom they belong. Ignorance is the mother of pleasure and of admiration. I am in Egypt, at Babylon, in China. To-day I sup under an acacia, and am in America : to-morrow, I shall dine in the midst of a kitchen-garden, under an arbour shaded with lilach ; and I shall be in France.

But, I shall be asked, Is there nothing to be feared in such a style of living ! May I meet the final period of my days while engaged in the practice of virtue ! I have heard many a history of persons who perished in hunting matches, in parties of pleasure, while travelling by land and by water ; but never in performing acts of beneficence. Gold is a powerful commander of respect with the commonalty. I display wealth sufficient to secure their attention, but not enough to tempt any one to plunder me. Besides the police of Paris is in excellent order. I am very circumspect in the choice of my hosts ; and if I perceive that I have been mistaken in my selection, the rent of my lodging is paid beforehand, and I return no more.

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On this plan of life I have not the least occasion for the encumbrances of furniture and servants. With what tender solicitude am I expected in each of my habitations ! What satisfaction does my arrival inspire ! What attention and zeal do my entertainers express to outrun my wishes ! I enjoy among them the choicest blessings of Society, without feeling any of the inconveniences. No one sits down at my table to backbite his neighbour, and no one leaves it with a disposition to speak unkindly of me. I have no children ; but those of my landlady are more eager to please me than their own parents. I have no wife : the most sublime charm of love is to devise and accomplish the felicity of another. I assist in the formation of happy marriages, or in promoting the happiness of those which are already formed. I thus dissipate my personal languor, I put my passions upon the right scent, by proposing to them the noblest attainments at which they can aim upon the earth. I have drawn nigh to the miserable with an intention to comfort them, and from them perhaps I shall derive consolation in my turn.

In this manner it is in your power to live, O ye great ones of the earth ! and thus might you multiply your fleeting days in the land through which you are merely travellers. Thus it is that you may learn to know men ; and form no longer, with your own Nation, a foreign race, a race of conquerors, living on the spoils of the country which you have subdued. Thus it is that, issuing from your palaces, encircled with a crowd of happy vassals, who are loading you with benedictions, you might present the image of
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the ancient Patricians, a name so dear to the Roman people. You are every day looking out for some new spectacle ; there is no one which possesses so much the charm of novelty as the happiness of Mankind. You wish for objects that are interesting : there is no one more interesting than the sight of the families of the poor peasantry, diffusing fruitfulness over your vast and solitary domains, or superannuated soldiers, who have deserved well of their country, seeking refuge under the shadow of your wings. Your compatriots are surely much better than tragedy heroes, and more interesting than the shepherds of the comic opera.*

The indigence of the commonalty is the first cause of the physical and moral maladies of the rich. It is the business of Administration to provide a remedy. As to the maladies of the soul resulting from indigence, I could wish some palliatives at least might be found. For this purpose, I would wish to have formed, at Paris, some establishment similar to those which humane Physicians and sage Lawyers have there instituted for remedying the ills of body and of fortune ; I mean dispensaries of consolation, to which an unfortunate wretch, secure of secrecy, nay of remaining unknown, might resort to disclose the cause of his distress. We have I grant confessors and preachers, for whom the sublime function of comforting the miserable seems to be reserved. But confessors are not always of the same disposition with their penitents, especially when the penitent is poor and not much known to them. Nay there are many confessors who have neither the talents nor the experience requisite

to the comforter of the afflicted. The point is not to pronounce absolution to the man who confesses his sins, but to assist him in bearing up under those of another, which lie much heavier upon him.

As to preachers, their sermons are usually too vague, and too injudiciously applied to the various necessities of their hearers. It would be of much more importance to the Public, if they would announce the subject of their intended discourses, rather than display the titles of their ecclesiastical dignities. They will declaim against avarice to a prodigal, or against profusion to a miser. They will expatiate on the dangers of ambition to a young man in love; and on those of love to an ancient female devotee. They will inculcate the duty of giving alms on the persons who receive them; and the virtue of humility on a poor water-porter. There are some who preach repentance to the unfortunate, who promise the joys of paradise to voluptuous courts, and who denounce the flames of hell against starving villages. I have known, in the country, a poor female peasant driven to madness by a sermon of this cast. She believed herself to be in a state of damnation, and lay along speechless and motionless. We have no sermons calculated to cure languor, sorrow, scrupulousness of conscience, melancholy, chagrin, and so many other distempers which prey upon the soul. Besides, how many circumstances change, to every particular auditor, the nature of the pain which he endures, and render totally useless to him all the parade of a trim harangue. It is no easy matter to find out, in a soul wounded and oppressed with timidity,

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the precise point of it's grief, and to apply the balm and the hand of the good Samaritan to the sore. This is an art known only to minds endowed with sensibility, who have themselves suffered severely, and which is not always the attainment of those who are virtuous only.

The people feel the want of this consolation ; and finding no man to whom they can make application for it, they address themselves to stones. I have sometimes read with an aching heart, in our churches, billets affixed by the wretched to the corner of a pillar, in some obscure chapel. They represented the cases of unhappy women abused by their husbands ; of young people labouring under embarrassment : they solicited not the money of the compassionate, but their prayers. They were upon the point of sinking into despair. Their miseries were inconceivable. Ah ! if men who have themselves been acquainted with grief, of all conditions, would unite in presenting to the sons and daughters of affliction their experience and their sensibility, more than one illustrious sufferer would come and draw from them those consolations, which all the preachers, and books, and philosophy in the World, are incapable to administer. All that the poor man needs in many cases, in order to soothe his woe, is a person into whose ear he can pour out his complaint.

A Society composed of men such as I have fondly imagined to myself, would undertake the important task of eradicating the vices and the prejudices of the populace. They would endeavour, for example, to apply a remedy to the barbarity which imposes such
oppressive

oppressive loads on the miserable horses, and which cruelly abuses them in other respects, while every street of the city rings with the horrible oaths of their drivers. They would likewise employ their influence with the rich, to take pity in their turn upon the human race. You see, in the midst of excessive heats, the hewers of stone exposed to the meridian Sun, and to the burning reverberation of the white substance on which they labour. Hence these poor people are frequently seized with ardent fevers, and with disorders in the eyes which issue in blindness. At other times, they have to encounter the long rains and pinching cold of Winter, which bring on rheums and consumptions. Would it be a very costly precaution for a master-builder, possessed of humanity, to rear in his work-yard a moveable shed of matting or straw, supported by poles, to serve as a shelter to his labourers? By means of a fabric so simple they might be spared various maladies of body and of mind; for most of them, as I have observed, are in this respect actuated by a false point of honour; and have not the courage to employ a screen against the burning heat of the Sun, or against rainy weather, for fear of incurring the ridicule of their companions.

The people might farther be inspired with a relish for morality, without the use of much expensive cookery. Nay every appearance of disguise renders truth suspected by them. I have many a time seen plain mechanics shed tears at reading some of our good romances, or at the representation of a tragedy. They afterwards demanded if the story which had
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thus affected them was really true; and on being informed that it was imaginary, they valued it no longer; they were vexed to think that they had thrown away their tears. The rich must have fiction in order to render morality palatable, and morality is unable to render fiction palatable to the poor; because the poor man still expects his felicity from truth, and the rich hope for theirs only from illusion.

The rich however stand in no less need than the populace of moral affections. These are, as we have seen, the moving springs of all the human passions. To no purpose do they pretend to refer the plan of their felicity to physical objects; they soon lose all taste for their castles, their pictures, their parks, when instead of sentiment they possess merely the sensations of them. This is so indubitably true, that if, under the pressure of their languor, a stranger happens to arrive to admire their luxury, all their powers of enjoyment are renovated. They seem to have consecrated their life to an indefinite voluptuousness; but present to them a single ray of glory, in the very bosom of death itself, and they are immediately on the wing to overtake it. Offer them regiments, and they post away after immortality. It is the moral principle therefore which must be purified and directed in Man. It is not in vain then that Religion prescribes to us the practice of virtue, which is the moral sentiment by way of excellence, seeing it is the road to happiness both in this World and that which is to come.

The society of which I have been suggesting the idea, would farther extend it's attentions into the retreats of virtue itself. I have remarked that about
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the age of forty-five, a striking revolution takes place in most men, and, to acknowledge the truth, that it is then they degenerate, and become destitute of principle. At this period it is that women transform themselves into men, according to the expression of a celebrated Writer, in other words, that they become completely depraved. This fatal revolution is a consequence of the vices of our education, and of the manners of Society. Both of these present the prospect of human happiness only toward the middle period of life, in the possession of fortune and of honours. When we have painfully scrambled up this steep mountain, and reached it's summit, about the middle of our course, we re-descend with our eyes turned back toward youth, because we have no perspective before us but death. Thus the career of life is divided into two parts, the one consisting of hopes, the other of recollections; and we have laid hold of nothing by the way but illusions.

The first, at least, support us by feeding desire; but the others overwhelm us by inspiring regret only. This is the reason that old men are less susceptible of virtue than young people though they talk much more about it, and that they are much more melancholy among us than among savage Nations. Had they been directed by Religion and Nature, they must have rejoiced in the approach of their latter end, as vessels just ready to enter the harbour. How much more wretched are those who having devoted their youth to virtue, seduced by that treacherous commerce with the World, look backward, and regret the pleasures of youth which they knew not how to

prize ! The empty glare which encompass the wicked dazzles their eyes ; they feel their faith staggering, and they are ready to exclaim with *Brutus* :—“ O Virtue ! thou art but an empty name.” Where shall we find books and preachers capable of restoring confidence to them in tempests which have shaken even the Saints ? They transfix the soul with secret wounds, and torment it with gnawing ulcers, which shrink from discovery. They are beyond all possibility of relief, except from a society of virtuous men who have been themselves tried through all the combinations of human wo, and who, in default of the ineffectual arguments of reason, may bring them back to the sentiment of virtue, at least by that of their friendship.

There is in China, if I am not mistaken, an establishment similar to that which I am proposing. At least certain Travellers, and among others *Ferdinand Mendez Pinto*, make mention of a house of Mercy, which takes up and pleads the cause of the poor and the oppressed, and which, in an infinite number of instances, goes forth to meet the calls of the miserable, much farther than our charitable Ladies do. The Emperor has bestowed the most distinguished privileges on it's members ; and the Courts of Justice pay the utmost deference to their requests. Such a society employed in acting well, would merit among us at least prerogatives as high as those whose attention is restricted to speaking well ; and by drawing forward into view the virtues of our own obscure citizens, would deserve at the least as highly of their Country, as those who do nothing but retail the sentences

tences of the sages, or what is not less common, the brilliant crimes of Antiquity.

Scrupulous care ought to be taken not to give to such an association the form of an Academy or Fraternity. Thanks to our mode of education, and to our manners, every thing that is reduced to form among us, corps, congregation, sect, party, is generally ambitious and intolerant. If the men which compose them draw nigh to a light which they themselves have not kindled, it is to extinguish it; if they touch upon the virtue of another, it is to blight it. Not that the greatest part of the members of those bodies are destitute of excellent qualities individually; but their incorporation is good for nothing, for this reason simply, that it presents to them centres different from the common centre of Country. What is it that has rendered a word so dear to humanity, theatrical and vain? What sense is now-a-days affixed to the term charity, the Greek names of which, *χάρης*, signifies attraction, grace, loveliness? Can any thing be more humiliating than our parochial charities, and than the humanity of our Philosophers?

I leave this project to be unfolded and matured by some good man, who loves God and his fellow-creatures, and who performs good actions in the way that Religion prescribes, without letting his left hand know what his right hand doth. Is it then a matter of so much difficulty to do good? Let us pursue the opposite scent to that which is followed by the ambitious and the malignant. They employ spies to furnish them with all the scandalous anecdotes of the day; let us employ ours in discovering, and

bringing to light, good works performed in secret. They advance to meet men in elevated situations, to range themselves under their standards, or to level them with the ground ; let us go forth in quest of virtuous men in obscurity, that we may make them our models. They are furnished with trumpets to proclaim their own actions, and to decry those of others ; let us conceal our own, and be the heralds of other mens' goodness. There is such a thing as refinement in vice ; let us carry virtue to perfection.

I am sensible that I may be apt to ramble a little too far. But should I have been so happy as to suggest a single good idea to one more enlightened than myself ; should I have contributed to prevent, some day in time to come, one poor wretch in despair from going to drown himself, or in a fit of rage from knocking out his enemy's brains, or in the lethargy of languor from going to squander his money and his health away among loose women ; I shall not have scribbled over a piece of paper in vain.

Paris presents many a retreat to the miserable, known by the name of hospitals. May Heaven reward the charity of those who have founded them, and the still greater virtue of those persons of both sexes who superintend them ! But first, without adopting the exaggerated ideas of the populace, who are under the persuasion that these houses possess immense revenues, it is certain, that a person well known, and an adept in the science of public finance, having undertaken to furnish the plan of a receptacle for the sick, found on calculation that the expense of each of them would not exceed eight-pence half-penny

penny a day : that they might be much better provided on these terms, and at an easier rate, than in the hospitals. For my own part, I am clearly of opinion that these same pence, distributed day by day in the house of a poor sick man, would produce a still farther saving, by contributing to the support of his wife and children. A sick person of the commonalty has hardly need of any thing more than good broths ; his family might partly subsist on the meat of which they were made.

But hospitals are subject to many other inconveniencies. Maladies of a particular character are there generated, frequently more dangerous than those which the sick carry in with them. They are sufficiently known, such especially as are denominated hospital-fevers. Besides these, evils of a much more serious nature, those which affect morals, are there communicated. A person of extensive knowledge and experience has assured me, that most of the criminals who terminate their days on a gibbet, or in the galleys, are the spawn of hospitals. This amounts to what has been already asserted, that a corps of whatever description is always depraved, especially a corps of beggars. I could wish therefore that so far from collecting and crowding together the miserable, they might be provided for, under the inspection of their own relations, or entrusted to poor families who would take care of them.

Public prisons are necessary ; but it is surely desirable that the unhappy creatures there immured should be less miserable while under confinement. Justice undoubtedly in depriving them of liberty,

propofes not only to punifh but to reform their moral character. Excefs of mifery and evil communications can change it only from bad to worfe. Experience farther demonftrates, that there it is the wicked acquire the perfection of depravity. One who went in only feeble and culpable, comes out an accomplished villain. As this fubject has been treated profoundly by a celebrated Writer, I fhall purfue it no farther. I fhall only beg leave to obferve, that there is no way but one to reform men, and that is to render them happier. How many who were living a life of criminality in Europe, have recovered their character in the Weft-India Iflands to which they were transported! They are become honeft men there, becaufe they have there found more liberty and more happinefs, than they enjoyed in their native country.

There is another clafs of Mankind ftill more worthy of compaffion, becaufe they are innocent: I mean perfons deprived of the ufe of reafon. They are fhut up; and they feldom fail of confequence to become more infane than they were before. I fhall on this occafion remark, that I do not believe there is through the whole extent of Afia, China however excepted, a fingle place of confinement for perfons of this description. The Turks treat them with fingular refpect; whether it be that *Mahomet* himfelf was occafionally fubject to mental derangement, or whether from a religious opinion they entertain, that as foon as a madman fetts his foot into a houfe the bleffing of God enters it with him. They delay not a moment to fet food before him, and carefs him in the

the tenderest manner. There is not an instance known of their having injured any one. Our madmen on the contrary are mischievous, because they are miserable. As soon as one appears in the streets, the children, themselves already rendered miserable by their education, and delighted to find a human being on whom they can vent their malignity with safety, pelt him with stones, and take pleasure in working him up into a rage. I must farther observe that there are no madmen among savages; and I could not wish for a better proof that their political constitution renders them more happy than polished Nations are, as mental derangement proceeds only from excessive chagrin.

The number of insane persons under confinement is with us enormously great. There is not a provincial town, of any considerable magnitude, but what contains an edifice destined to this use. Their treatment in these is surely an object of commiseration, and loudly calls for the attention of Government, considering that if after all they are no longer citizens, they are still men, and innocent men too. When I was pursuing my studies at Caen, I recollect having seen in the madmens' ward, some shut up in dungeons, where they had not seen the light for fifteen years. I one evening accompanied into some of those dismal caverns the good Curé de S. Martin, whose boarder I then was, and who had been called to perform the last duties of his office to one of those poor wretches, on the point of breathing his last. He was obliged, as well as I, to stop his nose all the time he was by the dying man; but the vapour which ex-

haled from his dunghill was so infectious, that my clothes retained the smell for more than two months, nay my very linen, after having been repeatedly sent to the washing. I could quote traits of the mode of treatment of those miserable objects which would excite horror. I shall relate only one which is still fresh in my memory.

Some years ago, happening to pass through l'Aigle, a small town in Normandy, I strolled out about sunset to enjoy a little fresh air. I perceived on a rising ground a convent most delightfully situated. A monk, who stood porter, invited me in to see the house. He conducted me through an immense court, in which the first thing that struck my eye was a man of about forty years old, with half a hat on his head, who advanced directly upon me, saying, "Be so good as stab me to the heart; be so good as stab me to the heart." The monk who was my guide, said to me, "Sir, don't be alarmed; he is a poor captain who lost his reason, on account of an unmilitary preference that passed upon him in his regiment."

"This house then," said I to him, "serves as a receptacle for lunatics:" "Yes," replied he, "I am Superior of it." He walked me from court to court, and conducted me into a small enclosure in which were several little cells of mason work, and where we heard persons talking with a good deal of earnestness. There we found a canon in his shirt, with his shoulders quite exposed, conversing with a man of a fine figure who was seated by a small table in front of one of those little cells. The monk went up to the poor canon, and with his full strength applied

plied a blow of his fist to the wretch's naked shoulder, ordering him at the same time to turn out. His comrade instantly took up the monk, and emphatically said to him : " Man of blood, you are guilty of " a very cruel action. Do not you see that this poor " creature has lost his reason ?" The monk, struck dumb for the moment, bit his lips, and threatened him with his eyes. But the other without being disconcerted said to him : " I know I am your victim ; " you may do with me whatever you please." Then, addressing himself to me, he shewed me his two wrists galled to the quick by the iron manacles with which he had been confined.

" You see, Sir," said he to me, " in what manner " I am treated !" I turned to the monk with an expression of indignation at a conduct so barbarous. He coolly replied : " Oh ! I can put an end to all his fine reasoning in a moment." I addressed however a few words of consolation to the unfortunate man, who, looking at me with an air of confidence, said, " I think, Sir, I have seen you at S. Hubert, at " the house of M. the Marechal *de Broglie*." " You " must be mistaken, Sir," replied I, " I never had " the honour of being at the Marechal *de Broglie*'s." Upon that, he instituted a process of recollection respecting the different places where he thought he had seen me, with circumstances so accurately detailed, and clothed with such appearances of probability, that the monk, nettled at his well-merited reproaches, and at the good sense which he displayed, thought proper to interrupt his conversation, by introducing a discourse about marriage, the purchase of horses,

horses, and so on. The moment that the chord of his insanity was touched his head was gone. On going out the monk told me that this poor lunatic was a man of very considerable birth. Some time afterward I had the pleasure of being informed, that he had found means to escape from his prison, and had recovered the use of his reason.

A great many physical remedies are employed for the cure of madness; and it frequently proceeds from a moral cause, for it is produced by chagrin. Might there not be a possibility to employ, for the restoration of reason to those disordered beings, means directly opposed to those which occasioned the loss of reason; I mean mirth, pleasure, and above all the pleasures of music? We see, from the instance of *Saul*, and many others of a similar nature, what influence music possesses for re-establishing the harmony of the soul. With this ought to be united treatment the most gentle, and care to place the unhappy patients, when visited with paroxysms of rage, not under the restraint of fetters, but in an apartment matted round, where they could do no mischief either to themselves or others. I am persuaded that by employing such humane precautions, numbers might be restored, especially if they were under the charge of persons who had no interest in perpetuating their derangement; as is but too frequently the case, with respect to families who are enjoying their estates, and houses of restraint where a good board is paid for their detention. It would likewise be proper, in my opinion, to commit the care of men disordered in their understanding to females, and that of females to men, on
account

account of the mutual sympathy of the two sexes with each other.

I would not wish that there should be in the kingdom any one art, craft or profession, but whose final retreat and recompense should be at Paris. Among the different classes of citizens who practise these, and of whom the greater part is little known in the capital, there is one, and that very numerous, which is not known at all there, though one of the most miserable, and that to which of all others the rich are under the strongest obligations, I mean the seamen. These hardy and unpolished beings are the men who go in quest of fuel to their voluptuousness to the very extremities of Asia, and who are continually exposing their lives upon our own coasts, in order to find a supply of delicacies for their tables. Their conversation is at least as sprightly as that of our peasantry, and incomparably more interesting, from their manner of viewing objects, and from the singularity of the countries which they have visited in the course of their voyages. At the recital of their many-formed disasters, and of the tempests which threatened them, while employed in conveying to you objects of enjoyment from every region of the Globe, ye happy ones of the earth! your own repose may be rendered more precious to you. By contrasts such as these your felicity will be heightened.

I know not whether it was for the purpose of procuring for himself a pleasure of this nature, or to give an enlivening sea air to the park of Versailles, that *Louis XIV.* planted a colony of Venetian gondoliers on the great canal which fronts the palace. Their
descendants

descendants subsist there to this day. This establishment, under a better direction, might have furnished a very desirable and useful retreat to our own seamen. But that great King, frequently misled by evil counsellors, almost always carried the sentiment of his own glory beyond his own people. What a contrast would these hardy sons of the waves, bedaubed with pitch, their wind and weather-beaten faces resembling sea-calves, arrived from Greenland, others from the coast of Guinea, have presented, with the marble statues, and verdant bowers of the park of Versailles ! *Louis XIV.* would oftener than once have derived from those blunt honest fellows, more useful information, and more important truth, than either books, or even his marine officers of the highest rank could have given him ; and on the other hand, the novelty of their characteristic singularity, and that of their reflections on his own greatness, would have provided for him spectacles much more highly amusing than those which the wits of his Court devised for him, and at an enormous expense. Besides what emulation would not the prospect of such preferments have kindled among our sailors ?

I ascribe the perfection of the English Marine, in part at least, simply to the influence of their Capital, and from it's being incessantly under the eye of the Court. Were Paris a sea-port as London is, how many ingenious inventions, thrown away upon modes and operas, would be applied to the improvement of navigation ! Were sailors seen there even as currently as soldiers, a passion for the marine service would be more extensively diffused. The condition of the
seamen,

seamen, become more interesting to the Nation and to it's rulers, would be gradually meliorated ; and at the same time this would have a happy tendency to mitigate the brutal despotism of those who frequently maintain their authority over them, merely by dint of swearing and blows. It is a good, and an easily practicable piece of policy, to enfeeble vice by bringing men nearer to each other, and by rendering them more happy. Our country gentlemen did not give over beating their hinds, till they saw that this useful part of Mankind had become interesting objects in books, and on the theatre.

Not that I wish for our seamen an establishment similar to that of the *Hotel des Invalides*. I am charmed with the architecture of that monument, but I pity the condition of it's inhabitants. Most of them are dissatisfied, and always murmuring, as any one may be convinced who will take the trouble to converse with them : I do not believe there is any foundation for this ; but experience demonstrates that men formed into a corps sooner or later degenerate, and are always unhappy. It would be wiser to follow the Laws of Nature, and to associate them by families. I could wish that the practice of the English were observed and copied, by settling our superannuated seamen on the ferries of rivers, on board all those little barges which traverse Paris, and by scattering them along the Seine, like tritons, to adorn the plains : we should see them stemming the tides of our rivers in wherries under smack-sails, luffing as they go ; and there they would introduce
methods

methods of Navigation more prompt, and more commodious, than those hitherto known and practised.

As to those whom age or wounds may have totally disabled for service, they might be suitably accommodated and provided for, in an edifice similar to that which the English have reared at Greenwich for the reception of their decayed seamen. But to acknowledge the truth, the State, I am persuaded, would find it a much more economical plan to allow them pensions, and that these very seamen would be much better disposed of in the bosom of their several families. This however need not prevent the raising at Paris a majestic and commodious monument, to serve as a retreat for those brave veterans. The capital sets little value upon them because it knows them not; but there are some among them who, by going over to the enemy, are capable of conducting a descent on our Colonies, and even upon our own coasts. Desertion is as common among our mariners as among our soldiers, and their desertion is a much greater loss to the State, because it requires more time to form them, and because their local knowledge is of much higher importance to an enemy than that of our cavaliers, or of our foot-soldiers.

What I have now taken the liberty to suggest on the subject of our seamen, might be extended to all the other estates of the kingdom without exception. I could wish that there were not a single one but what had its centre at Paris, and which might not find there a place of refuge, a retreat, a little chapel. All these monuments of the different classes of citizens,

zens, which communicate life to the body politic, decorated with the attributes peculiar to each particular craft and profession, would there figure with perfect propriety, and with most powerful effect.

After having rendered the Capital a resort of happiness and of improvement to our own Nation, I would allure to it the men of foreign nations from every corner of the Globe. O! ye Women, who regulate our destiny, how much ought you to contribute towards uniting Mankind, in a City where your empire is unbounded! In ministering to your pleasures do men employ themselves over the face of the whole Earth. While you are engrossed wholly in enjoyment, the Laplander issues forth in the midst of storm and tempest to pierce with his harpoon the enormous whale, whose beard is to serve for stuffing to your robes: a man of China puts into the oven the porcelain out of which you sip your coffee, while an Arabian of Moka is busied in gathering the berry for you: a young woman of Bengal on the banks of the Ganges is spinning your muslin, while a Russian, amidst the forests of Finland, is felling the tree which is to be converted into a mast for the vessel that is to bring it home to you

The glory of a great Capital is to assemble within it's walls the men of all Nations who contribute to it's pleasures. I should like to see at Paris, the Samoëdes with their coats of sea-calf-skin and their boots of sturgeon's hide; and the black Iolofs dressed in their waist-attire, streaked with red and blue. I could wish to see there the beardless Indians of Peru dressed in feathers from head to foot, strolling about

undismayed

undismayed in our public squares, around the statues of our Kings, mingled with stately Spaniards in whiflers and short-cloaks. It would give me pleasure to see the Dutch making a settlement on the thirsty ridges of Montmartre; and following the bent of their hydraulic inclination like the beavers, find the means of there constructing canals filled with water; while the inhabitants of the banks of the Oronoko should live comfortably dry, suspended over the lands inundated by the Seine, amidst the foliage of willows and alder-trees.

I could wish that Paris were as large, and of a population as much diversified, as those ancient cities of Asia, such as Nineveh and Suza, whose extent was so vast that it required three days to make the tour of them, and in which *Ahasuerus* beheld two hundred Nations bending before his throne. I could wish that every people on the face of the Earth kept up a correspondence with that city, as the members with the heart in the human body. What secret did the Asiatics possess to raise cities so vast and so populous? They are in all respects our elder brothers. They permitted all Nations to settle among them. Present men with liberty and happiness and you will attract them from the ends of the Earth.

It would be much to the honour of his humanity if some great Prince would propose this question to the discussion of Europe: Whether the happiness of a People did not depend upon that of its neighbours? The affirmative clearly demonstrated, would level with the dust the contrary maxim, that of *Machiavel*, which has too long governed our European politics.

It

It would be very easy to prove, in the first place, that a good understanding with her neighbours would enable her confidently to disband those land and naval forces which are so burdensome to a Nation. It might be demonstrated, secondly, that every people has been a partaker in the blessings and the calamities of their neighbours, from the example of the Spaniards, who made the discovery of America, and have scattered the advantages and the evils of it over all the rest of Europe. This truth may be farther confirmed from the prosperity and greatness attained by those Nations who were at pains to conciliate the good-will of their neighbours, as the Romans did, who extended farther and farther the privileges of citizenship, and thereby in process of time consolidated all the Nations of Italy into one single State. They would undoubtedly have formed but one single People of the whole Human Race, had not their barbarous custom of exacting the service of foreign slaves counteracted a policy so humane. It might finally be made apparent, how miserable those Governments were which, however well constituted internally, lived in a state of perpetual anxiety, always weak and divided, because they did not extend humanity beyond the bounds of their own territory. Such were the ancient Greeks: such is in modern times Persia, which is sunk into a state of extreme weakness, and into which it fell immediately after the brilliant reign of *Scha Abbas*, whose political maxim it was to surround himself with deserts; his own country has at length become one like those of his neighbours. Other examples to the same purpose

might be found among the Powers of Asia, who receive the Law from handfals of Europeans.

Henry IV. had formed the celestial project of engaging all Europe to live in peace; but his project was not sufficiently extensive to support itself: war must have fallen upon Europe from the other quarters of the World. Our particular destinies are connected with those of mankind. This is an homage which the Christian Religion justly challenges, and which it alone merits. Nature says to you, love thyself alone; domestic education says, love your family; the national, love your country; but Religion says, Love all Mankind without exception. She is better acquainted with our interests than our natural instinct is, or our parentage, or our politics. Human societies are not detached from each other like those of animals. The bees of France are not in the least affected by the destruction of the hives in America. But the tears of Mankind, shed in the New World, cause streams of blood to flow in the ancient Continent; and the war-hoop of a savage on the bank of a lake has oftener than once re-echoed through Europe, and disturbed the repose of her Potentates. The Religion which condemns love of ourselves, and which enjoins the love of Mankind, is not self-contradictory as certain sophists have alleged; she exacts the sacrifice of our passions only to direct them toward the general felicity; and by inculcating upon us the obligation of loving all men, she furnishes us with the only real means of loving ourselves.

I could wish therefore that our political relations
with

with all the Nations of the World, might be directed toward a gracious reception of their subjects in the Capital of the kingdom. Were we to expend only a part of what we lay out on foreign communications, we should be no great losers. The Nations of Asia send no Consuls nor Ministers, nor Ambassadors, out of the Country, unless in very extraordinary cases: and all the Nations of the Earth seek to them. It is not by sending Ambassadors in great state, and at a vast expense, to neighbouring Nations, that we conciliate or secure their friendship. In many cases our ostentatious magnificence becomes a secret source of hatred and jealousy among their grandees. The point is to give a kind reception to their subjects properly so called, the weak, the persecuted, the miserable. Our French refugees were the men who conveyed part of our skill, and of our power, to Prussia, and to Holland. How many unseen relations of commerce, and of national benevolence, have been formed upon the foundation of such graciousness of reception! An honest German who retires into Austria, after having made a little fortune in France, is the means of sending to us a hundred of his compatriots, and disposes the whole canton in which he settles to wish us well. By bonds like these national friendships are contracted, much better than by diplomatic treaties; for the opinion of a Nation always determines that of the Prince.

After having rendered the city of men wonderfully happy, I would direct my attention to the embellishment and commodiousness of the city of stones. I would rear in it a multitude of useful monuments:

I would extend along the houses, arcades as in Turin, and a raised pavement as in London, for the accommodation of foot-passengers; in the streets where it was practicable, trees and canals as in Holland, for the facility of carriage; in the suburbs, caravanseries as in the cities of the East, for the entertainment, at a moderate expense, of travellers from foreign lands; toward the centre of the city, markets of vast extent, and surrounded with houses six or seven stories high, for the reception of the poorer sort, who will soon be at a loss for a place where to lay their head. I would introduce a great deal of variety into their plans and decorations. In the circular surrounding space I would dispose temples, halls of justice, public fountains; the principal streets should terminate in them. These markets, shaded with trees, and divided into great compartments, should display in the most beautiful order all the gifts of *Flora*, of *Ceres*, and of *Pomona*. I would erect in the centre the statue of a good King; for it is impossible to place it in a situation more honourable to his memory, than in the midst of the abundance enjoyed by his subjects.

I know of no one thing which conveys to me an idea more precise of the police of a city, and of the felicity of its inhabitants, than the sight of its markets. At Petersburg every market is parcelled out into sub-divisions destined to the sale of a single species of merchandise. This arrangement pleases at first glance, but soon fatigues the eye by its uniformity. *Peter the First* was fond of regular forms, because they are favourable to despotism. For my own part, I should like to see the most perfect harmony prevailing

prevailing among our merchants, and the most complete contrasts among their wares. By removing the rivalities which arise out of commerce in the same sort of goods, those jealousies which are productive of so many quarrels would be prevented. It would give me pleasure to behold Abundance there pouring out the treasure of all her horns pell-mell; pheasants, fresh-cod, heath-cocks, turbot, pot-herbs, piles of oysters, oranges, wild-ducks, flowers, and so on. Permission should be granted to expose to sale there every species of goods whatever; and this privilege alone would be sufficient to destroy various species of monopoly.

I would erect in the city but few temples; these few however should be august, immense, with galleries on the outside and within, and capable of containing on festival days the third part of the population of Paris. The more that temples are multiplied in a State the more is Religion enfeebled. This has the appearance of a paradox; but look at Greece and Italy covered with church-towers, while Constantinople is crowded with Greek and Italian renegadoes. Independently of the political, and even religious causes which produce these national depravations, there is one which is founded in Nature, the effects of which we have already recognised in the weakness of the human mind. It is this, That affection diminishes in proportion as it is divided among a variety of objects. The Jews, so astonishingly attached to their religion, had but one single temple, the recollection of which excites their regret to this day.

I would have amphitheatres constructed at Paris

like those at Rome, for the purpose of assembling the People, and of treating them from time to time with days of festivity. What a superb site for such an edifice is presented in the rising ground at the entrance into the Elysian Fields! How easy would it have been to hollow it down to the level of the plain in form of an amphitheatre, disposed into ascending rows of seats covered with green turf simply, having it's ridge crowned with great trees, exalted on an elevation of more than fourscore feet: What a magnificent spectacle would it have been to behold an immense people ranged round and round, like one great family, eating, drinking, and rejoicing in the contemplation of their own felicity!

All these edifices should be constructed of stone; not in petty-layers, according to our mode of building, but in huge blocks such as the Ancients employed,* and as becomes a city that is to last for ever.

* And such as Savages employ. Travellers are astonished when they survey in Peru the monuments of the ancient Incas, formed of vast irregular stones perfectly fitted to each other. Their construction presents at first sight two great difficulties: How could the Indians have transported those huge masses of stone; and How did they contrive to adapt them so exactly to each other, notwithstanding their irregularity? Our men of Science have first supposed a machinery proper for the transportation of them; as if there could be any machine more powerful than the arms of a whole people exerting themselves in concert. They next tell us, that the Indians gave them those irregular forms by dint of labour and industry. This is a downright insult to the common sense of Mankind. Was it not much easier to cut them into a regular than into an irregular shape? I myself was embarrassed in attempting a solution of this problem. At length having read in the Memoirs of Don *Ullca*, and likewise in some other travellers, that there are found in many places of Peru beds

The streets and the public squares should be planted with great trees of various sorts. Trees are the real monuments of Nations. Time, which speedily impairs the Works of Man, only increases the beauty of those of Nature. It is to the trees that our favourite walk the Boulevards is indebted for it's principal charm. They delight the eye by their verdure; they elevate the soul to Heaven by the loftiness of their stems; they communicate respect to the monuments which they shade by the majesty of their forms. They contribute, more than we are aware of, to rivet our attachment to the places which we have inhabited. Our memory fixes on them as on points of union which have secret harmonies with the soul of

of stone along the surface of the ground, separated by clefts and crevices, I presently comprehended the address of the ancient Peruvians. All they had to do was to remove, piece and piece, those horizontal layers of the quarries, and to place them in a perpendicular direction by moving the detached pieces close to each other. Thus they had a wall ready made, which cost them nothing in the hewing. The natural genius is possessed of resources exceedingly simple, but far superior to those of our arts. For example, the Savages of Canada had no cooking pots of metal previous to the arrival of the Europeans. They had however found means to supply this want, by hollowing the trunk of a tree with fire. But how did they contrive to set it a boiling, so as to dress a whole ox, which they frequently did? I have applied to more than one pretended man of genius for a solution of this difficulty, but to no purpose. As to myself, I was long puzzled I acknowledge in devising a method by which water might be made to boil in kettles made of wood, which were frequently large enough to contain several hundred gallons. Nothing however could be easier to Savages: they heated pebbles and flints till they were red-hot, and cast them into the water in the pot, till it boiled. Consult *Champlain*.

Man. They possess a commanding influence over the events of our life, like those which rise by the shore of the Sea, and which frequently serve as a direction to the pilot.

I never see the linden tree but I feel myself transported into Holland; nor the fir without representing to my imagination the forests of Russia. Trees frequently attach us to Country when the other ties which united us to it are torn asunder. I have known more than one exile who in old-age was brought back to his native village, by the recollection of the elm under the shade of which he had danced when a boy. I have heard more than one inhabitant of the Isle of France sighing after his Country under the shade of the banana, and who said to me; "I should be perfectly tranquil where I am could I but see a violet." The trees of our natal soil have a farther and most powerful attraction, when they are blended, as was the case among the Ancients, with some religious idea, or with the recollection of some distinguished personage. Whole Nations have attached their patriotism to this object. With what veneration did the Greeks contemplate at Athens the olive-tree which *Minerva* had there caused to spring up, and on Mount Olympus, the wild-olive with which *Hercules* had been crowned! *Plutarch* relates, that, when at Rome the fig-tree under which *Romulus* and *Remus* had been suckled by a wolf, discovered signs of decay from a lack of moisture, the first person who perceived it exclaimed, Water! water! and all the people in consternation flew with pots and pails full of water to refresh it. For my part, I am persuaded that though we

we have already far degenerated from Nature, we could not without emotion behold the cherry-tree of the forest, into which our good King *Henry IV.* clambered up, when he perceived the army of the Duke of *Mayenne* filing off to the bottom of the adjoining valley.

A city, were it built completely of marble, would have to me a melancholy appearance, unless I saw in it trees and verdure :* on the other hand a landscape, were it Arcadia, were it along the banks of the *Alpheus*, or did it present the swelling ridges of Mount *Lyceum*, would appear to me a wilderness, if I did not see in it at least one little cottage. The works

* Trees are from their duration the real monuments of Nations; and they are farther their calendar, from the different seasons at which they send forth their leaves, their flowers, and their fruits. Savages have no other, and our own peasantry make frequent use of it. I met one day, toward the end of Autumn, a country girl all in tears, looking about for a handkerchief which she had lost upon the great road. “ Was your handkerchief very pretty ? ” said I to her. “ Sir,” replied she, “ it was quite new; I bought “ it last bean-time.” It has long been my opinion, that if our historical epochs, so loudly trumpeted, were dated by those of Nature, nothing more would be wanting to mark their injustice, and expose them to ridicule. Were we to read, for example, in our books of History, that a Prince had caused part of his subjects to be massacred, to render Heaven propitious to him, precisely at the season when his kingdom was clothed with the plenty of harvest; or were we to read the relations of bloody engagements, and of the bombardment of cities, dated with the flowering of the violet, the first cream-cheese making, the sheep-marking season; Would any other contrast be necessary to render the perusal of such histories detestable? On the other hand, such dates would communicate immortal graces to the actions of good Princes, and would confound the blessings which they bestowed, with those of Heaven.

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of Nature and those of Man mutually embellish each other. The spirit of selfishness has destroyed among us a taste for Nature. Our peasantry see no beauty in our plains but there where they see the return of their labour. I one day met in the vicinity of the Abbey de la Trappe, on the stony road of Notre Dame d'Apré, a countrywoman walking along with two large loaves of bread under her arm. It was in the month of May; and the weather inexpressibly fine. "What a charming season it is!" said I to the good woman: "How beautiful are those apple trees in blossom! How sweetly these nightingales sing in the woods!"... "Ah!" replied she, "I don't mind nosegays, nor these little squallers! It is bread that we want." Indigence hardens the heart of the country people, and shuts their eyes. But the good folks of the town have no greater relish for Nature, because the love of gold regulates all their other appetites. If some of them set a value on the liberal arts, it is not because those arts imitate natural objects; it is from the price to which the hand of great masters raises their productions. That man gives a thousand crowns for a picture of the country painted by *Lorrain*, who would not take the trouble to put his head out of the window to look at the real landscape: and there is another who ostentatiously exhibits the bust of *Socrates* in his study, who would not receive that Philosopher into his house were he in life, and who perhaps would not scruple to concur in adjudging him to death, were he under prosecution.

The taste of our Artists has been corrupted by that of our trades-people. As they know that it is not
Nature

Nature but their own skill which is prized, their great aim is to display themselves. Hence it is that they introduce a profusion of rich accessories into most of our monuments, while they frequently omit altogether the principal object. They produce for instance as an embellishment for gardens, vases of marble into which it is impossible to put any vegetable ; for apartments, urns and pitchers into which you cannot pour any species of fluid ; for our cities, colonnades without palaces, gates in places where are no walls, public squares fenced with barriers, to prevent the people from assembling in them. It is they tell us that the grass may be permitted to shoot. A fine project truly ! One of the heaviest curses which the Ancients pronounced against their enemies was, that they might see the grass grow in their public places. If they wish to see verdure in ours, Why do they not plant trees in them, which would give the people at once shade and shelter ? There are some who introduce into the trophies which ornament the town residences of our grandees, bows, arrows, catapults ; and who have carried the simplicity of the thing to such a height as to plant on them Roman standards, inscribed with these characters, S. P. Q. R. This may be seen in the Palais de Bourbon. Posterity will be taught to believe that the Romans were, in the eighteenth century, masters of our country. And in what estimation do we mean, vain as we are, that our memory should be held by them, if our monuments, our medals, our trophies, our dramas, our inscriptions, continually hold out to them strangers and antiquity ?

The Greeks and Romans were much more consistent. Never did they dream of constructing useless monuments. Their beautiful vases of alabaster and calcedony were employed in festivals, for holding wine or perfumes; their peristyles always announced a palace; their public places were destined only to the purpose of assembling the people. There they reared the statues of their great men, without enclosing them in rails of iron, in order that their images might still be within reach of the miserable, and be open to their invocation after death, as they themselves had been while they were alive. *Juvenal* speaks of a statue of bronze at Rome the hands of which had been worn away by the kisses of the People. What glory to the memory of the person whom it represented! Did it still exist, that mutilation would render it more precious than the *Venus de Medicis* with its fine proportions.

Our populace we are told is destitute of patriotism. I can easily believe it, for every thing is done that can be done to destroy this principle in them. For example, on the pediment of the beautiful church which we are building in honour of Saint *Genevieve*, but which is too small as all our modern monuments are, an adoration of the cross is represented. You see indeed the Patroness of Paris in bas-reliefs under the peristyle, in the midst of Cardinals; but would it not have been more in character to exhibit to the People their humble Patroness in her habit of shepherdess, in a little jacket and cornet, with her scrip, her crook, her dog, her sheep, her moulds for making cheese, and all the peculiarities of her age and
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of her condition, on the pediment of the church dedicated to her memory? To these might have been added a view of Paris, such as it was in her time. From the whole would have resulted contrasts and objects of comparison of the most agreeable kind. The People at sight of this rural scenery would have called to memory the days of old. They would have conceived esteem for the obscure virtues which are necessary to their happiness, and would have been stimulated to tread in the rough paths of glory which their lowly patroness trod before them, whom it is now impossible for them to distinguish in her Grecian robes, and surrounded by Prelates.

Our Artists in some cases deviate so completely from the principal object, that they leave it out altogether. There was exhibited some years ago, in one of the workshops of the Louvre, a monument in honour of the Dauphin and Dauphiness, designed for the cathedral of the city of Sens. Every body flocked to see it, and came away in raptures of admiration. I went with the rest; and the first thing I looked for was the resemblance of the Dauphin and Dauphiness, to whose memory the monument had been erected. There was no such thing there, not even in medallions. You saw *Time* with his scythe, *Hymen* with urns, and all the thread-bare ideas of allegory, which frequently is by the way the genius of those who have none. In order to complete the elucidation of the subject, there were on the pannels of a species of altar, placed in the midst of this group of symbolical figures, long inscriptions in Latin, abundantly foreign to the memory of the great Prince who

was

was the object of them. There, said I to myself, there is a fine national monument ! Latin inscriptions for French readers, and pagan symbols for a cathedral ! Had the Artist, whose chisel I in other respects admired, meant to display his own talents, he ought to have recommended to his successor, to leave imperfect a small part of the base of that monument, which death prevented himself from finishing, and to engrave these words upon it : *Coustrou moriens faciebat.** This consonance of fortune would have united him to the royal monument, and would have given a deep impresson to the reflections on the vanity of human things, which the sight of a tomb inspires.

Very few Artists catch the moral object ; they aim only at the picturesque. “ Oh, what a fine subject for “ a *Belisarius* ! ” exclaim they, when the conversation happens to turn on one of our great men reduced to distress. Nevertheless, the liberal arts are destined only to revive the memory of Virtue, and not Virtue to give employment to the fine Arts. I acknowledge that the celebrity which they procure is a powerful incentive to prompt men to great actions, though after all it is not the true one ; but though it may not inspire the sentiment, it sometimes produces the acts. Now-a-days we go much farther. It is no longer the glory of virtue which associations and individuals endeavour to merit ; it is the honour of distributing it to others at which they aim. Heaven knows the strange confusion which results from this ! Women of very suspicious virtue, and kept-mistresses, establish

* The work of *Coustrou*, left unfinished by death.

Rose-feasts : they dispense premiums on virginity ! Opera-girls crown our victorious Generals ! The *Mareschal de Saxe*, our Historians tells us, was crowned with laurels on the national theatre : as if the Nation had consisted of players, and as if it's Senate were a theatre ! For my own part I look on Virtue as so respectable, that nothing more would be wanting, but a single subject in which it was eminently conspicuous, to overwhelm with ridicule those who dared to dispense to it such vain and contemptible honours. What stage-dancing girl, for example, durst have had the impudence to crown the august forehead of *Turenne* or that of *Fenelon*.

The French Academy would be much more successful, if it aimed at fixing, by the charms of eloquence, the attention of the Nation on our great men ; did it attempt less, in the elogiums which it pronounces to panegyryze the dead, than to satyryze the living. Besides posterity will rely as little on the language of praise as on that of censure. For, first, the term elogium is suspected of flattery : and farther, this species of eloquence characterizes nothing. In order to paint virtue, it is necessary to bring forward defects and vices, that conflict and triumph may be rendered conspicuous. The style employed in it is full of pomp and luxuriance. It is crowded with reflections, and paintings, foreign very frequently to the principal object. It resembles a Spanish horse ; it prances about wonderfully, but never gets forward. This kind of eloquence, vague and indecisive as it is, suits no one great man in particular, because it may be applied in general to all those who have run the

same

same career. If you only change a few proper names in the elogium of a General, you may comprehend in it all Generals past and future. Besides it's bombast tone is so little adapted to the simple language of truth and virtue, that when a Writer means to introduce characteristical traits of his hero, that we may know at least of whom he is speaking, he is under the necessity of throwing them into notes, for fear of deranging his academical order.

Affuredly had *Plutarch* written the elogium only of illustrious men, he would have had as few readers at this day as the Panegyric of *Trajan* has, which cost the younger *Pliny* so many years labour. You will never find an academical elogium in the hands of one of the common People. You might see them perhaps turning over those of *Fontenelle*, and a few others, if the persons celebrated in them had paid attention to the people while they lived. But the Nation takes pleasure in reading History.

As I was walking some time ago toward the quarter of the Military School, I perceived at some distance, near a sand-pit, a thick column of smoke. I bent my course that way to see what produced it. I found in a very solitary place, a good deal resembling that which *Shakespear* makes the scene where the three witches appear to *Macbeth*, a poor and aged woman sitting upon a stone. She was deeply engaged in reading in an old book, close by a great pile of herbage which she had set on fire. I first asked her for what purpose she was burning those herbs? She replied that it was for the sake of the ashes, which she gathered up and sold to the laundresses; that for
this

this end she bought of the gardeners the refuse plants of their grounds, and was waiting till they were entirely consumed, that she might carry off the ashes, because they were liable to be stolen in her absence. After having thus satisfied my curiosity, she returned to her book, and read on with deep attention. Eagerly desirous to know what book it was with which she filled up her hours of languor, I took the liberty to ask the title of it. “It is the life of M. *de Turenne*,” she replied. “Well, what do you think of him?” said I. “Ah!” replied she with emotion, “he was a brave man, who suffered much uneasiness from a Minister of State, while he was alive!” I withdrew, filled with increased veneration for the memory of M. *de Turenne*, who served to console a poor old woman in distress. It is thus that the virtues of the lower classes of society support themselves on those of great men, as the feeble plants, which to escape being trampled under foot cling to the trunk of the oak.

OF NOBILITY.

The ancient Nations of Europe imagined that the most powerful stimulus to the practice of virtue was to ennoble the descendants of their virtuous citizens. They involved themselves by this in very great inconveniencies. For in rendering nobility hereditary, they precluded to the rest of the citizens the paths which lead to distinction. As it is the perpetual, exclusive possession of a certain number of families, it ceases to be a national recompense, otherwise a whole Nation would consist of Nobles at length; which

would produce a lethargy fatal to arts and handicrafts; and this is actually the case in Spain, and in part of Italy.

Many other mischiefs necessarily result from hereditary noblesse, the principal of which is the formation, in a State, of two several Nations which come at last to have nothing in common between them; patriotism is annihilated, and both the one and the other hastens to a state of subjection. Such has been, within our recollection, the fate of Hungary, of Bohemia, of Poland, and even of part of the provinces of our own kingdom, such as Britanny, where a nobility insufferably lofty, and multiplied beyond all bounds, formed a class absolutely distinct from the rest of the citizens. It is well worthy of being remarked, that these countries, though republican, though so powerful, in the opinion of our political Writers, from the freedom of their constitution, have been very easily subjected by despotic Princes, who were the masters they tell us of slaves only. The reason is, that the People in every country prefer one Sovereign to a thousand tyrants, and that their fate always decides the fate of their lordly oppressors. The Romans softened the unjust and odious distinctions which existed between Patricians and Plebeians, by granting to these last privileges and employments of the highest respectability.

Means in my opinion still more effectual were employed by that People to bring the two classes of citizens to a state of closer approximation; particularly the practice of adoption. How many great men started up out of the mass of the People, to merit
this

this kind of recompense, as illustrious as those which Country bestows, and still more addressed to the heart ! Thus did the *Catos* and the *Scipios* distinguish themselves, in hope of being ingrafted into Patrician families. Thus it was that the Plebeian *Agricola* obtained in marriage the daughter of *Augustus*. I do not know, but perhaps I am only betraying my own ignorance, that adoption ever was in use among us, unless it were between certain great Lords, who from the failure of heirs of blood were at a loss how to dispose of their vast possessions when they died. I consider adoption as much preferable to nobility conferred by the State. It might be the means of reviving illustrious families, the descendants of which are now languishing in the most abject poverty. It would endear the Nobility to the People, and the People to the Nobility. It would be proper that the privilege of bestowing the rights of adoption should be rendered a species of recompense to the Nobles themselves. Thus, for example, a poor man of family, who had distinguished himself, might be empowered to adopt one of the commonalty, who should acquire eminence. 'A man of birth would be on the look-out for virtue among the People ;' and a virtuous man of the commonalty would go in quest of a worthy nobleman as a patron. Such political bonds of union appear to me more powerful, and more honourable, than mercenary matrimonial alliances, which, by uniting two individual citizens of different classes, frequently alienate their families. Nobility thus acquired would appear to me far preferable to that which public employments confer ; for these, be-

ing entirely the purchase of so much money, from that very circumstance lose their respectability, and consequently degrade the nobility attached to them.

But taking it at the best, one disadvantage must ever adhere to hereditary nobility, namely, the eventual excessive multiplication of persons of that description. A remedy for this has been attempted among us, by adjudging nobility to various professions, such as maritime commerce. First of all, it may be made a question, Whether the spirit of commerce can be perfectly consistent with the honour of a gentleman? Besides, What commerce shall he carry on who has got nothing! Must not a premium be paid to the merchant for admitting a young man into his counting-house to learn the first principles of trade? And where should so many poor men of noble birth find the means, who have not wherewithal to clothe their children? I have seen some of them, in Brittany, the descendants of the most ancient families of the province, so reduced as to earn a livelihood by mowing down the hay of the peasantry for so much a day.

Would to God that all conditions were nobilitated, the profession of agriculture in particular! for it is that, above all others, of which every function is allied to virtue. In order to be a husbandman there is no need to deceive, to flatter, to degrade one's-self, to do violence to another. He is not indebted for the profits of his labour to the vices or the luxury of his age, but to the bounty of Heaven. He adheres to his Country, at least by the little corner of it which he cultivates. If the condition of the husbandman

were

were ennobled, a multitude of benefits to the inhabitants of the kingdom would result from it. Nay it would be sufficient if it were not considered as ignoble. But here is a resource which the State might employ for the relief of the decayed nobility. Most of the ancient feignories are purchased now-a-days by persons who possess no other merit but that of having money ; so that the honour of those illustrious houses have fallen to the share of men who, to confess the truth, are hardly worthy of them. The King ought to purchase those lordships as often as they come to market ; reserve to himself the feignorial rights, with part of the lands, and form of those small domains civil and military benefices, to be bestowed as rewards on good officers, useful citizens, and noble and poor families, nearly as the Timariots are in Turkey.

OF AN ELYSIUM.

The hereditary transmission of Nobility is subject to a farther inconveniency ; namely this, Here is a man, who sets out with the virtues of a *Marius*, and finishes the career, loaded with all his vices. I am going to propose a mode of distinguishing superior worth which shall not be liable to the dangers of inheritance, and of human inconstancy : it is to withhold the rewards of virtue till after death.

Death affixes the last seal to the memory of Man. It is well known of what weight the decisions were which the Egyptians pronounced upon their citizens after life was terminated. Then too it was that the Romans sometimes exalted theirs to the rank of demi-gods, and sometimes threw them into the Ti-

ber. The People, in default of priests and magistrates, still exercises among us a part of this priesthood. I have oftener than once stood still of an evening, at sight of a magnificent funeral procession, not so much to admire the pomp of it, as to listen to the judgment pronounced by the populace on the high and puissant Prince whose obsequies were celebrating. I have frequently heard the question asked, Was he a good master? Was he fond of his wife and children? Was he a friend to the poor? The People insist particularly on this last question; because, being continually influenced by the principal call of Nature, they distinguish in the rich hardly any other virtue than beneficence: I have often heard this reply given: "Oh! he never did good to any one: he was "an unkind relation, and a harsh master." I have heard them say, at the interment of a Farmer-General who left behind him more than twelve millions of livres, (half a million sterling): "He drove away "the country poor, from the gate of his castle, with "fork and flail." On such occasions, you hear the spectators fall a swearing, and cursing the memory of the deceased. Such are usually the funeral orations of the rich, in the mouth of the populace. There is little doubt that their decisions would produce consequences of a certain kind, were the police of Paris less strict than it is.

Death alone can ensure reputation, and nothing short of religion can consecrate it. Our grandees are abundantly aware of this. Hence the sumptuousness of their monuments in our churches. It is not that the clergy make a point of their being interred there,

as many imagine. The clergy would equally receive their perquisites were the interment in the country : they would take care, and very justly, to be well paid for such journeys ; and they would be relieved from breathing all the year round in their stalls, the putrid exhalations of rotting carcases. The principal obstacle to this necessary reform in our police proceeds from the great and the rich, who, seldom disposed to crowd the church in their life time, are eager for admission after their death, that the people may admire their superb *mausolea*, and their virtues portrayed in brass and marble. But thanks to the allegorical representations of our Artists, and to the Latin inscriptions of our *Literati*, the People know nothing about the matter ; and the only reflection which they make at sight of them is, that all this must have cost an enormous sum of money ; and that such a vast quantity of copper might be converted to advantage into porridge-pots.

Religion alone has the power of consecrating, in a manner that shall last, the memory of Virtue. The King of Prussia, who was so well acquainted with the great moving springs of politics, did not overlook this. As the Protestant Religion, which is the general profession of his kingdom, excludes from the churches the images of the Saints, he supplied their place with the portraits of the most distinguished officers who had fallen in his service. The first time I looked into the churches at Berlin, I was not a little astonished to see the walls adorned with the portraits of officers in their uniform. Beneath, there was an inscription indicating their names, their age, the

place of their birth, and the battle in which they had been killed. There is likewise subjoined, if my recollection is accurate, a line or two of elogium. The military enthusiasm kindled by this fight is inconceivable.

Among us, there is not a monkish order so mean as not to exhibit in their cloisters, and in their churches, the pictures of their great men, beyond all contradiction more respected, and better known, than those of the State. These subjects, always accompanied with picturesque and interesting circumstances, are the most powerful means which they employ for attracting novices. The Carthusians already perceive, that the number of their novices is diminished, now that they have no longer in their cloisters the melancholy history of *S. Bruno* painted in a style so masterly, by *Le Sueur*. No one order of citizens prizes the portraits of men who have been useful only to the Nation, and to Mankind; print-sellers alone sometimes display the images of them filed on a string, and illuminated with blue and red. Thither the People resort to look for them among those of players and opera-girls. We shall soon have it is said the exhibition of a museum at the Tuilleries; but that royal monument is consecrated rather to talents than to patriotism, and like so many others it will undoubtedly be locked up from the People.

First of all, I would have it made a rule that no citizen whatever should be interred in the church. *Xenophon* relates that *Cyrus*, the sovereign Lord of the greatest part of Asia, gave orders at his death, that his body should be buried in the open country, under

der the trees, to the end that, said this great Prince, the elements of it might be quickly united to those of Nature, and contribute a-new to the formation of her beautiful Works. This sentiment was worthy of the sublime soul of *Cyrus*. But tombs in every country, especially the tombs of great Kings, are the most endeared of all monuments to the Nations. The Savages consider those of their ancestors as titles to the possession of the lands which they inhabit. "This country is ours," say they, "the bones of our fathers are here laid to rest." When they are forced to quit it, they dig them up with tears, and carry them off with every token of respect.

The Turks erect their tombs by the side of the high-ways, as the Romans did. The Chinese make theirs enchanted spots. They place them in the vicinity of their cities, in grottos dug out of the side of hills; they decorate the entrance into them with pieces of architecture, and plant before them, and all around, groves of cypress, and of firs, intermingled with trees which bear flowers and fruits. These spots inspire a profound and a delicious melancholy; not only from the natural effect of their decoration, but from the moral sentiment excited in us by tombs, which are, as we have said in another place, monuments erected on the confines of two Worlds.

Our great ones then would lose nothing of the respect which they wish to attach to their memory, were they to be interred in public receptacles of the dead, adjoining to the Capital. A magnificent sepulchral chapel might be constructed in the midst of the burying ground, devoted solely to funereal obsequies,

quies, the celebration of which frequently disturbs the worship of God in parish-churches. Artists might give full scope to their imagination in the decorations of such a mausoleum; and the temples of humility and truth would no longer be profaned by the vanity and falshood of monumental epitaphs.

While each citizen should be left at liberty to lodge himself, agreeably to his own fancy, in this last and lasting abode, I would have a large space selected, not far from Paris, to be consecrated by every solemnity of Religion to be a general receptacle of the ashes of such as may have deserved well of their country.

The services which may be rendered to our country are infinite in number, and very various in their Nature. We hardly acknowledge any but what are of one and the same kind, derived from formidable qualities, such as valour. We revere that only which terrifies us. The tokens of our esteem are frequently testimonies of our weakness. We are brought up to sense of fear only, and not of gratitude. There is no modern Nation so insignificant as not to have it's *Alexander* and it's *Cesar* to commemorate, but no one it's *Bacchus* and it's *Ceres*. The Ancients, as valiant at least as we are, thought incomparably better. *Plutarch* observes somewhere, that *Ceres* and *Bacchus*, who were mortals, attained the supreme rank of Gods, on account of the pure, universal, and lasting blessings which they had procured for Mankind; but that *Hercules*, *Theseus*, and other Heroes, were raised only to the subordinate rank of demi-gods, because the services which they rendered to men were transient,

scent, circumscribed, and contained a great mixture of evil.

I have often felt astonishment at our indifference about the memory of those of our Ancestors who introduced useful trees into the country, the fruits and shade of which are to this day so delicious. The names of those benefactors are most of them entirely unknown; their benefits are however perpetuated to us from age to age. The Romans did not act in this manner. *Pliny* tells us, with no small degree of self-complacency, that of the eight species of cherry known at Rome in his time, one was called the *Plinian*, after the name of one of his relations, to whom Italy was indebted for it. The other species of this very fruit bore, at Rome, the names of the most illustrious families, being denominated the Apronian, the Actian, the Cæcilian, the Julian. He informs us that it was *Lucullus* who, after the defeat of *Mithridates*, transplanted from the kingdom of Pontus the first cherry-trees into Italy, from whence they were propagated in less than a hundred and twenty years all over Europe, England not excepted, which was then peopled with barbarians. They were perhaps the first means of the civilization of that Island, for the first laws always spring up out of agriculture: and for this very reason it is that the Greeks gave to *Ceres* the name of *Legislatrix*.

Pliny, in another place, congratulates *Pompey* and *Vespasian* on having displayed at Rome the ebony-tree, and that of the balm of Judea, in the midst of their triumphal processions, as if they had then triumphed not only over the Nations, but over the
very

very Nature of their countries. Affuredly, if I entertained a wish to have my name perpetuated, I would much rather have it affixed to a fruit in France than to an island in America. The People in the season of that fruit would recal my memory with tokens of respect. My name, preserved in the baskets of the peasantry, would endure longer than if it were engraved on columns of marble. I know of no monument in the noble family of *Montmorenci* more durable, and more endeared to the People, than the cherry which bears it's name. The Good-Henry, otherwise *lapathum*, which grows without culture in the midst of our plains, will confer a more lasting duration on the memory of *Henry IV.* than the statue of bronze placed on the Pont-Neuf, though protected by an iron rail and a guard of soldiers. If the seeds and the heifers which *Louis XV.* by a natural movement of humanity, sent to the Island of Otaheité, should happen to multiply there, they will preserve his memory much longer, and render it much dearer among the Nations of the South-Sea, than the pitiful pyramid of bricks which the fawning Academicians attempted to rear in honour of him at Quito, and perhaps than the statues erected to him in the heart of his own kingdom.

The benefit of a useful plant is in my opinion one of the most important services which a citizen can render to his Country. Foreign plants unite us to the Nations from whence they come; they convey to us a portion of their happiness, and of their genial Suns. The olive-tree represents to me the happy climate of Greece much better than the book of *Pausanias*;

sanias; and I find the gifts of *Minerva* more powerfully expressed in it than upon medallions. Under a great-chestnut in blossom I feel myself laid to rest amidst the rich umbrage of America; the perfume of a citron transports me to Arabia; and I am an inhabitant of voluptuous Peru whenever I inhale the emanations of the heliotrope.

I would begin then with erecting the first monuments of the public gratitude to those who have introduced among us the useful plants; for this purpose, I would select one of the islands of the Seine, in the vicinity of Paris, to be converted into an Elysium. I would take for example that one which is below the majestic bridge of Neuilly, and which in a few years more will actually be joined to the suburbs of Paris. I would extend my field of operation, by taking in that branch of the Seine which is not adapted to the purposes of navigation, and a large portion of the adjoining Continent. I would plant this extensive district with the trees, the shrubbery, and the herbage, with which France has been enriched for several ages past. There should be assembled the great Indian-chestnut, the tulip-tree, the mulberry, the acacia of America and of Asia; the pines of Virginia and Siberia; the bear's-ear of the Alps; the tulips of Calcedonia, and so on. The service-tree of Canada, with its scarlet clusters should have a place; the *magnolia grandiflora* of America, which produces the largest and most odoriferous of flowers: the ever-green thuia of China, which puts forth no apparent flower, should interlace their boughs, and form here and there enchanted groves.

Under

Under their shade, and amidst carpets of variegated verdure, should be reared the monuments of those who transplanted them into France. We should behold, around the magnificent tomb of *Nicot* Ambassador from France to the Court of Portugal, which is at present in the church of St. Paul, the famous tobacco plant spring up, called at first after his name *Nicotiana*, because he was the man who first diffused the knowledge of it over Europe. There is not a European Prince but what owes him a statue for that service, for there is not a vegetable in the World which has poured such sums into their treasuries, and so many agreeable illusions into the minds of their subjects. The *nepenthes* of *Homer* is not once to be compared to it. There might be engraved on a tablet of marble adjoining to it, the name of the Flemish *Auger de Busbequius*, Ambassador from *Ferdinand* the First King of the Romans to the Porte, in other respects so estimable from the charms of his epistolary correspondence; and this small monument might be placed under the shade of the lilach, which he transported from Constantinople, and of which he made a present to Europe * in 1562. The lucern of Media should there surround with it's shoots the monument dedicated to the memory of the unknown husbandman, who first sowed it on our stinty hillocks, and who presented us with an article of pasture, in parched situations, which renovates itself at least four times a year. At sight of the solanum of America which produces at it's root the potatoe, the poorer part of the community would bless the name of the

* See *Matthiola* on *Dioscorides*.

man who secured to them a species of aliment which is not liable, like corn, to suffer by the inconstancy of the elements, and by the granaries of monopolizers. There too should be displayed, not without a lively interest, the urn of the unknown Traveler who adorned to endless generations the humble window of his obscure habitation with the brilliant colours of *Aurora*, by transplanting thither the nun of Peru.*

On advancing into this delicious spot, we should behold under domes and porticos the ashes and the busts of those who, by the invention of useful arts, have taught us to avail ourselves of the productions of Nature, and who by their genius have spared us the necessity of long and painful labours. There would be no occasion for epitaphs. The figures of the implements employed in weaving of stockings; of those used in twisting of silk, and in the construction of the windmill, would be monumental inscriptions as august, and as expressive, on the tombs of their inventors, as the sphere inscribed in the cylinder on that of *Archimedes*. There might one day be traced the aërostatic globe, on the tomb of *Mongolfier*; but it would be proper to know beforehand, whether that strange machine, which elevates men into the air by means

* For my own part, I would contemplate the monument of that man, were it but a simple tile, with more respect than the superb mausolea which have been reared in many places of Europe, and of America, in honour of the inhuman conquerors of Mexico and Peru. More Historians than one have given us their elogium; but divine Providence has done them justice. They all died a violent death, and most of them by the hand of the executioner.

of fire, or gas, shall contribute to the happiness of Mankind; for the name of the inventor of gunpowder himself, were we capable of tracing it, could not be admitted into the retreats of the benefactors of Humanity.

On approaching toward the centre of this Elysium we should meet with monuments still more venerable, of those who by their virtue have transmitted to posterity fruits far more delicious than those of the vegetables of Asia, and who have called into exercise the most sublime of all talents. There should be placed the monuments and the statues of the generous *Duquesne*, who himself fitted out a squadron, at his sole expense, in the defence of his Country: of the sage *Catinat*, equally tranquil in the mountains of Savoy, and in the humble retreat of St. Gratian; and of the heroic Chevalier *d'Affas*, sacrificing himself by night for the preservation of the French army in the woods of Klosterkam.

There should be the illustrious Writers, who inflamed their compatriots with the ardor of performing great actions. There we should see *Amyot* leaning on the bust of *Plutarch*; and Thou, who hast given at once the theory and the example of virtue, divine Author of *Telemachus*! we should reverence thy ashes and thy image, in an image of those elysian fields which thy pencil has delineated in such glowing colours.

I would likewise give a place to the monuments of eminent women, for virtue knows no distinction of sex. There should be reared the statues of those who with all the charms of beauty preferred a laborious and obscure life, to the vain delights of the World;

of

of matrons who re-established order in a deranged family ; who, faithful to the memory of a husband frequently chargeable with infidelity, preserved inviolate the conjugal vow, even after death had cancelled the obligation, and devoted youth to the education of the dear pledges of an union now no more : and finally, the venerable effigies of those who attained the highest pinnaele of distinction by the very obscurity of their virtues. Thither should be transported the tomb of a Lady of Lamoignon, from the poor church of Saint Giles where it remains unnoticed : it's affecting epitaph would render it still more worthy of occupying this honourable station than the chisel of *Girardon*, whose master-piece it is : in it we read that a design had been entertained to bury her body in another place ; but the poor of the parish, to whom she was a mother all her life long, carried it off by force, and deposited it in their church : they themselves would undoubtedly transport the remains of their benefactress, and resort to this hallowed spot to display them to the public veneration.

Hic manus ob Patriam pugnando vulnera passi ;
 Quique Sacerdotes casti, dum vita manebat ;
 Quique pii Vates, & *Phæbo* digna locuti ;
 Inventas aut qui vitam excoluere per artes ;
 Quique sui memores alios fecere merendo.*

ÆNEID. BOOK vi.

“ Here

* Thus imitated :

Here Patriot-bands who for their Country bled :
 Priests, who a life of purest virtue led :
 Here Bards sublime, fraught with ethereal fire,
 Whose heavenly strains outvied *Apollo's* lyre :

“ Here inhabit the heroic bands who bled in fighting the battles of their Country ; the sacred ministers of religion, whose life exhibited unfulfilled purity ; venerable bards, who uttered strains not unworthy

Divine Inventors of the useful Arts :

All those whose generous and expansive hearts,

By goodness sought to purchase honest fame ;

And dying left behind a deathless name.

Had *St. Pierre*, in the course of his travels, come over to this Island, and visited *Stowe*, he would have found his idea of an Elysium anticipated, and upon no mean scale, by the great Lord COBHAM, who has rendered every spot of that terrestrial Paradise sacred to the memory of departed excellence. What would have given our Author peculiar satisfaction, the Parish Church stands in the centre of the Garden ; hence the People have unrestrained access to it ; the monuments are for the most part patriotic, without regard to the distinctions of rank and fortune, except as allied to virtue ; and the best inscriptions are in plain English, and humble prose. In a beautifully solemn valley, watered by a silent stream, and shaded by the trees of the Country, stands the Temple of the British Worthies. The decorations and the arrangements are simple ; only that there is a mythological *Mercury* peeping over in the centre, to contemplate the immortal shades whom he has conducted to the Elysian Fields. Were I Marquis of BUCKINGHAM, the wing-heeled God, with his caduceus, and Latin motto, should no longer disfigure the uniformity and simplicity of that enchanting scene ; and if *Charon's* old crazy barge too were sunk to the bottom, the place and the idea would be greatly improved.

To those who have never been at *Stowe* it may not be unacceptable to read the Names, and the characteristic Inscriptions of this lovely retreat, consecrated to Patriot worth, exalted genius, and the love of the Human Race.

SIR THOMAS GRESHAM,

Who, by the honourable profession of a Merchant, having enriched himself, and his Country, for carrying on the Commerce of the World, built the Royal Exchange.

IGNATIUS

“ worthy of *Apollo* himself ; and those who, by the
 “ invention of useful arts, contributed to the comfort
 “ of human life ; all those, in a word, who by deserv-
 “ ing well of Mankind have purchased for themselves
 “ a deathless name.”

There

IGNATHUS JONES,

Who, to adorn his Country, introduced and rivalled the Greek and Roman Architecture.

JOHN MILTON,

Whose sublime and unbounded genius equalled a subject that carried him beyond the limits of the World.

WILLIAM SHAKESPEAR,

Whose excellent genius opened to him the whole heart of Man, all the mines of Fancy, all the stores of Nature ; and gave him power, beyond all other Writers, to move, astonish, and delight Mankind.

JOHN LOCKE,

Who, best of all Philosophers, understood the powers of the Human Mind, the nature, end, and bounds of Civil Government ; and, with equal courage and sagacity, refuted the slavish systems of usurped authority over the rights, the consciences, or the reason of Mankind.

SIR ISAAC NEWTON,

Whom the GOD of Nature made to comprehend his Works ; and, from simple principles, to discover the Laws never known before, and to explain the appearances never understood, of this stupendous Universe.

SIR FRANCIS BACON, (LORD VERULAM.)

Who, by the strength and light of a superior genius, rejecting vain speculation, and fallacious theory, taught to pursue truth, and improve Philosophy by the certain method of experiment.

KING ALFRED,

The mildest, justest, most beneficent of Kings ; who drove out the Danes, secured the Seas, protected Learning, established Juries, crushed Corporation, guarded Liberty, and was the Founder of the English Constitution.

There I would have, scattered about, monuments of every kind, and apportioned to the various degrees of merit: obelisks, columns, pyramids, urns, bas-reliefs, medallions, statues, tablets, peristyles, domes; I would not have them crowded together as in a repository, but disposed with taste; neither would I have them all of white marble, as if they came out of the

EDWARD, PRINCE OF WALES,

The terror of Europe, the delight of England; who preserved unaltered, in the height of Glory and Fortune, his natural Gentleness and Modesty.

QUEEN ELIZABETH,

Who confounded the projects and destroyed the Power that threatened to oppress the liberties of Europe; shook off the yoke of Ecclesiastical Tyranny; restored Religion from the Corruptions of Popery; and, by a wife, a moderate, and a popular Government, gave Wealth, Security, and Respect to England.

KING WILLIAM III,

Who by his Virtue and Constancy, having saved his Country from a foreign Master, by a bold and generous enterprize, preserved the Liberty and Religion of Great-Britain.

SIR WALTER RALEIGH,

A valiant Soldier, and an able Statesman; who, endeavouring to rouse the spirit of his Master, for the Honour of his Country, against the ambition of Spain, fell a sacrifice to the influence of that Court, whose arms he had vanquished, and whose designs he opposed.

SIR FRANCIS DRAKE,

Who, through many perils, was the first of Britons that adventured to sail round the Globe; and carried into unknown Seas and Nations, the knowledge and glory of the English Name.

JOHN HAMPDEN,

Who with great spirit, and consummate abilities, begun a noble opposition to an arbitrary Court, in defence of the Liberties of his Country; supported them in Parliament, and died for them in the field.

same

same quarry ; but of marbles and stones of every colour. There would be no occasion, through the whole extent of this vast enclosure, which I suppose to be at least a mile and a half in diameter, for the application of the line, nor for digging up the ground, nor for grass-plots, nor for trees cut into shape and fantastically trimmed, nor for any thing resembling what is to be seen in our gardens. For a similar reason I would have no Latin inscriptions, nor mythological expressions, nor any thing that favoured of the Academy. Still less would I admit of dignities, or of honours, which call to remembrance the vain ideas of the World ; I would retrench from them all the qualities which are destroyed by death ; no importance should there be assigned but to good actions, which survive the man and the citizen, and which are the only titles that posterity cares for, and that GOD recompenses. The inscriptions upon them should be simple, and naturally suggested by each particular subject. I would not set the living a-talking uselessly to the dead, and to inanimate objects, as is the case in our epitaphs ; but the dead, and inanimate objects, should speak to the living for their instruction, as among the Ancients. These correspondencies of an invisible to a visible nature, of a time remote to the time present, convey to the soul the celestial extension of infinity, and are the source of the delight which ancient inscriptions inspire.

Thus, for example, on a rock placed amidst a tuft of strawberry-plants of Chili, these words might be inscribed :

I was unknown to Europe ; but, in such a Year, such a Person, born in such a Place, transplanted me from the lofty Mountains of Chili, and now I bear Flowers and Fruit in the happy Climate of France.

Underneath a bas-relief of coloured marble, which should represent little children eating, drinking, and playing, the following inscription might appear :

We were exposed in the Streets to the Dogs, to Famine and Cold ; such a Compassionate Female, of such a Place, lodged us, clothed us, and fed us with the Milk which our own Mothers had denied.

At the foot of a statue of white marble, of a young and beautiful woman, sitting and wiping her eyes, with symptoms of grief and joy :

I was odious in the Sight of GOD and Man ; but, melted into Penitence, I have made my Peace with Heaven by Contrition, and have repaired the Mischief which I had done to Men, by befriending the Miserable.

Near this might be inscribed, under that of a young girl in mean attire, employed with her distaff and spindle, and looking up to Heaven with rapture :

I have learned to Despise the vain Delights of the World,
and now I enjoy Happiness,

Of those monuments, some should exhibit no other elogium but the name simply : such should be, for example, the tomb which contained the ashes of the Author of *Telemachus* ; or at most I would engrave on it the following words, so expressive of his affectionate and sublime character :

He fulfilled the Two Great Precepts of the Law :
He loved GOD and Man.

I have

I have no need to suggest, that these inscriptions might be conceived in a much happier style than mine; but I would insist upon this, that in the figures introduced there should be displayed no air of insolence; no dishevelled locks flying about in the wind, like those of the Angel sounding the resurrection-trumpet, no theatrical grief, and no violent tossing of the robes, like the Magdalene of the Carmelites; no mythological attributes, which convey nothing instructive to the People. Every personage should there appear with his appropriate badge of distinction: there should be exhibited the sea-cap of the sailor, the cornet of the nun, the stool of the Savoyard, pots for milk, and pots for soup.

These statues of virtuous citizens ought to be fully as respectable as those of the Gods of Paganism, and unquestionably more interesting than that of the antique grinder or gladiator. But it would be necessary that our Artists should study to convey, as the Ancients did, the characters of the soul in the attitude of the body, and in the traits of the countenance, such as penitence, hope, joy, sensibility, innocence. These are the peculiarities of Nature, which never vary, and which always please whatever be the dexterity. Nay the more contemptible that the occupations and the garb of such personages are, the more sublime will appear the expression of charity, of humanity, of innocence, and of all their virtues. A young and beautiful female, labouring like *Penelope* at her web, and modestly dressed in a Grecian robe, with long plaits, would there no doubt present an object pleasing to every one: but I should think her

a thousand times more interesting than the figure of *Penelope* herself, employed in the same labour, under the tatters of misfortune and misery.

There should be on those tombs no skeletons, no bats-wings, no Time with his scythe, no one of those terrifying attributes whereby our slavish education endeavours to inspire us with horror at the thought of death, that last benefit of Nature : but we should contemplate on them symbols which announce a happy and immortal life ; vessels, shattered by the tempest, arriving safe in port ; doves taking their flight toward Heaven, and the like.

The sacred effigies of virtuous citizens, crowned with flowers, with the characters of felicity, of peace, and of consolation in their faces, should be arranged toward the centre of the island, around a vast mossy down, under the trees of the Country, such as stately beech-trees, majestic pines, chestnut-trees loaded with fruit. There, likewise, should be seen the vine wedded to the elm, and the apple-tree of Normandy clothed with fruit of all the variety of colours which flowers display. From the middle of that down should ascend a magnificent temple in form of a rotundo. It should be surrounded with a peristyle of majestic columns, as was formerly at Rome the *Moles Adriani*. But I could wish it to be much more spacious. On the frieze these words might appear :

To the Love of the Human Race.

In the centre I would have an altar simple and unornamented, at which, on certain days of the year, divine service might be celebrated. No production of sculpture nor of painting, no gold nor jewels, should

should be deemed worthy of decorating the interior of this temple ; but sacred inscriptions should announce the kind of merit which there received the crown. All those who might repose within the precincts undoubtedly would not be Saints. But over the principal gate, on a tablet of white marble, these divine words might meet the eye :

Her Sins, which were many, are forgiven ; for
she loved much.

On another part of the frize, the following inscription, which unfolds the nature of our duties, might be displayed :

Virtue is an Effort made upon Ourselves, for the Good of Men,
in the View of pleasing GOD only.

To this might be subjoined the following, very much calculated to repress our ambitious emulation :

The smallest Act of Virtue is of more Value than the Exercise of
the greatest Talents.

On other tablets might be inscribed maxims of trust in the divine Providence, extracted from the Philosophers of all Nations ; such as the following, borrowed from the modern Persians :

When Affliction is at the Height, then we are the most encouraged
to look for Consolation. The narrowest Part of the Defile is
at the Entrance of the Plain.*

And that other of the same country :

Whoever has cordially devoted his Soul to GOD, has effectually
secured himself against all the Ills which can befall Him, both
in this World, and in the next.

* *Chardin's* Palace of Isfahan.

There might be inserted some of a philosophic cast, on the vanity of human things, such as the following :

Estimate each of your Days by Pleasures, by Loves, by Treasures, and by Grandeurs ; the Last will accuse them all of Vanity.

Or that other, which opens to us a perspective of the life to come :

He who has provided Light for the Eye of Man, Sounds for his Ear, Perfumes for his Smell, and Fruits for his Palate, will find the Means of one Day replenishing his Heart, which nothing here below can satisfy.

And that other, which inculcates charity toward men from the motives of self-interest :

When a Man studies the World, he prizes those only who possess Sagacity ; but, when he studies Himself, he esteems only those who exercise Indulgence.

I would have the following inscribed round the cupola, in letters of antique bronze :

*Mandatum novum do vobis, ut diligatis invicem ; sicut dilexi vos,
ut et vos diligatis invicem.*

JOAN. cap. xiii. v. 34

A new Commandment I give unto you, that ye love one another ; as I have loved you, that ye also love one another,

In order to decorate this temple externally with a becoming dignity, no ornament would be necessary except those of Nature. The first rays of the rising, and the last of the setting Sun, would gild it's cupola, towering above the forests : in the day-time the fires of the South, and by night the lustre of the Moon, would trace it's majestic shadow on the spreading down : the Seine would repeat the reflexes of it
it's

it's flowing stream. In vain would the tempest rage around it's enormous vault ; and when the hand of Time should have bronzed it with moss, the oaks of the Country should issue from it's antique cornices, and the eagles of Heaven, hovering round and round, would resort thither to build their nests.

Neither talents, nor birth, nor gold, should constitute a title for claiming the honour of a monument in this patriotic and holy ground. But it will be asked, Who is to judge, and to decide, the merits of the persons whose ashes are to be there deposited ? The King alone should have the power of decision, and the people the privilege of reporting the cause. It should not be sufficient for a citizen, in order to his obtaining this kind of distinction, that he had cultivated a new plant in a hot-house, or even in his garden ; but it should be requisite to have it naturalized in the open field, and the fruit of it carried for sale to the public market. It ought not to be deemed sufficient that the model of an ingenious machine was preserved in the collection of an Artist, and approved by the Academy of Sciences ; it should be required to have the machine itself in the hands of the People and converted to their use. It ought by no means to suffice, in order to establish the claim of a literary Work, that the prize had been adjudged to it by the French Academy ; but that it should be read by that class of men for whose use it was designed. Thus, for example, a patriotic *Ode* should be accounted good for nothing, unless it were sung about the streets by the common people. The merit of a naval or military Commander should be ascertained,
not

not by the report of Gazettes, but by the suffrages of the sailors or soldiery.

The people in truth distinguish hardly any other virtue in the citizen except beneficence: they consult only their own leading want; but their instinct on this article is conformable to the divine Law: for all the virtues terminate in that, even those which appear the most remote from it; and supposing there were rich men who meant to captivate their affections by doing them good, that is precisely the feeling with which we propose to inspire them. They would fulfil their duties, and the lofty and the low conditions of humanity would be reduced to a state of approximation.

From an Institution of this kind would result the re-establishment of one of the Laws of Nature, of all others the most important to a Nation; I mean an inexhaustible perspective of infinity, as necessary to the happiness of a whole Nation as to that of an individual. Such is, as we have caught a glimpse in another place, the nature of the human mind; if it perceives not infinity in its prospects, it falls back upon itself, and destroys itself by the exertion of its own powers. Rome presented to the patriotism of her citizens the conquest of the World: but that object was too limited. Her last victory would have proved the commencement of her ruin. The establishment which I am now proposing is not subjected to this inconveniency. No object can possibly be proposed to Man more unbounded, and more profound, than that of his own latter end. There are no monuments more varied and more agreeable than those

those of virtue. Were there to be reared annually in this Elysium, but a single tablet of the marble of Brittany, or of the granite of Auvergne, there would always be the means of keeping the People awake, by the spectacle of novelty. The provinces of the kingdom would dispute with the Capital the privilege of introducing the monuments of their virtuous inhabitants.

What an august Tribunal might be formed, of Bishops eminent for their piety, of upright Magistrates, of celebrated Commanders of Armies, to examine their several pretensions! What memoirs might one day appear, proper to create an interest in the minds of the People, who see nothing in their library but the sentences of death pronounced on illustrious criminals, or the lives of Saints, which are far above their sphere. How many new subjects for our men of letters, who have nothing for it but to trudge eternally over the beaten ground of the age of *Louis XIV.* or to prop up the reputation of the Greeks and Romans! What curious anecdotes for our wealthy voluptuaries! They pay a very high price for the History of an American insect, engraved in every possible manner, and studied through the microscope minute by minute, in all the phases of its existence. They would not have less pleasure in studying the manners of a poor collier, bringing up his family virtuously in the forests, in the midst of smugglers and banditti; or those of a wretched fisherman, who, in finding delicacies for their tables, is obliged to live like a heron in the midst of tempests.

I have no doubt that these monuments, executed
with

with the taste which we are capable of displaying, would attract crowds of rich strangers to Paris. They resort hither already to live in it, they would then flock hither to die among us. They would endeavour to deserve well of a Nation become the arbiter of the virtues of Europe, and to acquire a last asylum in the holy land of this Elysium; where all virtuous and beneficent men would be reputed citizens. This establishment, which might be formed undoubtedly in a manner very superior to the feeble sketch which I have presented of it, would serve to bring the higher conditions of life into contact with the lower, much better than our churches themselves, into which avarice and ambition frequently introduce among the citizens distinctions more humiliating than are to be met with even in Society. It would allure foreigners to the Capital, by holding out to them the rights of a citizenship illustrious and immortal. It would unite, in a word, Religion to Patriotism, and Patriotism to Religion, the mutual bonds of which are on the point of being torn asunder.

It is not necessary for me to subjoin, that this establishment would be attended with no expense to the State. It might be reared and kept up, by the revenue of some rich abbey, as it would be consecrated to Religion and to the rewards of virtue. There is no reason why it should become, like the monuments of modern Rome, and even like many of our own royal monuments, an object of filthy lucre to individuals, who sell the sight of them to the curious. Particular care would be taken not to exclude the People, because they are meanly habited; nor to
hunt

hunt out of it, as we do from our public gardens, poor and honest artificans in jackets, while well-dressed courtezans flaunt about with effrontery in their great alleys. The lowest of the commonalty should have it in their power to enter at all seasons. It is to you, O ye miserable of all conditions, that the sight of the friends of Humanity should of right appertain; and your patrons are henceforth no where but among the statues of virtuous men! There, a soldier at sight of *Catinat* would learn to endure calumny. There, a girl of the town, sick of her infamous profession, would with a sigh cast her eyes down to the ground, on beholding the statue of modesty approached with honour and respect: but at sight of that of a female of her own condition, reclaimed to the paths of virtue, she should raise them toward Him who preferred repentance to innocence.

It may be objected to me, That our poorer sort would very soon spread destruction over all those monuments; and it must indeed be admitted, that they seldom fail to treat in this manner those which do not interest them. There should undoubtedly be a police in this place; but the people respect monuments which are destined to their use. They commit ravages in a park, but do not wantonly destroy any thing in the open country. They would soon take the Elysium of their Country under their own protection, and watch over it with zeal much more ardent than that of Swiss and military guards.

Besides more than one method might be devised to render that spot respectable and dear to them. It ought to be rendered an inviolable asylum to the unfortunate

fortunate of every description; for example, to fathers who have incurred the debt of the month's nursing of a child; and to those who have committed venial and inconsiderate faults; it would be proper to prohibit any arrest taking place there upon any one's person, except by an express warrant from the King under his own signature. This likewise should be the place to which laborious families out of employment might be directed to address themselves. There ought to be a strict prohibition to make it a place of alms-giving, but an unbounded permission to do good in it. Persons of virtue, who understand how to distinguish, and to employ men, would resort thither in quest of proper objects in whose behalf they might employ their credit; others, in the view of putting respect on the memory of some illustrious personage, would give a repast at the foot of his statue to a family of poor people. The State would set the example of this at certain favourite epochs, such as a festival in honour of the King's birth-day. Provisions might then be distributed among the populace, not by tossing loaves at their heads, as in our public rejoicings; but they might be classed, and made to sit down on the grass in professional assemblages, round the statues of those who invented, improved, or perfected the several arts. Such repasts would have no resemblance to those which the rich sometimes give to the wretched, out of ceremony, and in which they respectfully wait upon their humble guests with napkins under their arm. The persons who gave the entertainment should be obliged to sit down at table with their company, and to eat and drink with them. It would
be

be needleſs to impoſe on them the taſk of waſhing the feet of the poor ; but they might be admoniſhed of rendering to them a ſervice of much more real importance, that of ſupplying them with ſhoes and ſtockings.

There the man of wealth would be inſtructed really to praſtiſe virtue, and the People to know it. The Nation would there learn their great duties, and be aſſiſted in forming a juſt idea of true greatneſs. They would behold the homage preſented to the memory of virtuous men, and the offerings tendered to the DEITY, ultimately applied to the relief of the miſerable.

Such repaſts would recal to our remembrance the love-feaſts of the primitive Chriſtians, and the Saturnalia of death, toward which every day is carrying us forward, and which, by ſpeedily reducing us all to an eſtate of equality, will efface every other difference among us except that of the good which we ſhall have done in life.

In the days of other times, in order to do honour to the memory of virtuous men, the faithful aſſembled in places conſecrated by their actions, or by their ſepulchres, on the brink of a fountain, or under the ſhade of a foreſt. Thither they had proviſions carried, and invited thoſe who had none to come and partake with them. The ſame cuſtoms have been common to all religions. They ſtill ſubſiſt in thoſe of Aſia. You find them prevailing among the ancient Greeks. When *Xenophon* had accompliſhed that famous retreat by which he ſaved ten thouſand of his compatriots, ravaging, as he went, the territory of Perſia,

he destined part of the booty thus obtained, to the founding of a chapel in Greece to the honour of *Diana*. He attached to it a certain revenue, which should annually supply with the amusement of the chace, and with a plentiful repast, all persons who should repair to it on a particular day.

OF THE CLERGY.

If our poor are sometimes partakers of some wretched ecclesiastical distribution, the relief which they thence derive, so far from delivering them out of their misery, only serves to continue them in it. What landed property however has been bequeathed to the Church expressly for their benefit? Why then are not the revenues distributed, in sums sufficiently large to rescue annually from indigence at least a certain number of families? The Clergy allege that they are the administrators of the goods of the poor: but the poor are neither ideots nor madmen to stand in need of administrators: besides, it is impossible to prove by any one passage of either the Old or New Testament, that this charge pertained to the priesthood: if they really are the administrators of the poor, they have then no less than seven millions of persons in the kingdom under their temporal administration. I shall push this reflection no farther. It is a matter of unchangeable obligation to render to every one his due: the priests are by divine right the agents of the poor, but the King alone is the natural administrator.

As indigence is the principal cause of the vices of the People, opulence may, like it, produce in it's

turn

turn irregularities in the Clergy. I shall not avail myself here of the reprehensions of St. *Jerome*, of St. *Bernard*, of St. *Augustin*, and of the other Fathers of the Church, to the Clergy of their times, and of the Countries in which they lived; wherein they predicted to them the total destruction of Religion, as a necessary consequence of their manners and of their riches. The prediction of several of them was speedily verified in Africa, in Asia, in Judea, and in the Greeian Empire, in which not only the religion, but the very civil government of those Nations, totally disappeared. The avidity of most ecclesiastics soon renders the functions of the Church suspicious: this is an argument which strikes all men. I believe witnesses, said *Pascal*, who brave death. This reasoning however must be admitted with many grains of allowance; but no objection can be offered to this: I distrust witnesses who are enriching themselves by their testimony. Religion in truth has proofs natural and supernatural, far superior to those which men are capable of furnishing it with. She is independent of our regularity and of our irregularity; but our Country depends on these.

The World at this day looks on most priests with an eye of envy; Shall I say of hatred? But they are the children of their age, just like other men. The vices which are laid to their charge belong partly to their Nation, partly to the times in which they live, to the political constitution of the State, and to their education. Ours are Frenchmen like ourselves; they are our kinsmen, frequently sacrificed to our own fortune, through the ambition of our fathers.

Were we charged with the performance of their duties, we should frequently acquit ourselves worse than they do. I know of none so painful, none so worthy of respect, as those of a good ecclesiastic.

I do not speak of those of a Bishop, who exercises a vigilant care over his diocese, who institutes judicious seminaries of instruction, who maintains regularity and peace in communities, who resists the wicked and supports the weak, who is always ready to succour the miserable, and who, in this age of error, refutes the objections of the enemies of the faith by his own virtues. He has his reward in the public esteem. It is possible to purchase by painful labours the glory of being a *Fenelon*, or a *Juigné*. I say nothing of those of a parish-minister, which, from their importance, sometimes attract the attention of Kings; nor of those of a missionary advancing to the crown of martyrdom. The conflicts of this last frequently endure but for a single day, and his glory is immortal. But I speak of those of a simple and obscure parish-drudge, to whom no one pays any manner of attention. He is under the necessity, in the first place, of sacrificing the pleasures and the liberty of his juvenile days, to irksome and painful studies. He is obliged to support all the days of his life the exercise of continency, like a cumbersome cuirass, on a thousand occasions which endanger the loss of it. The World honours theatrical virtues only, and the victories of a single moment. But to combat day after day an enemy lodged within the fortress, and who makes his approaches under the disguise of a friend; to repel incessantly, without a witness, without

out glory, without applause, the most impetuous of passions and the gentlest of propensities—this is not easy.

Conflicts of another kind await him from without. He is every day called upon to expose his life to the attack of epidemical distempers. He is obliged to confess, with his head on the same pillow, persons attacked with the small-pox, with the putrid and the purple fever. This obscure fortitude appears to me very far superior to the courage of a soldier. The military man combats in the view of armies, animated with the noise of cannon and drums; he presents himself to the stroke of death as a hero. But the priest devotes himself to it as a victim. What fortune can this last promise himself from his labours? In many cases, a precarious subsistence at most! Besides, supposing him to have acquired wealth, he cannot transmit it to his descendants. He beholds all his temporal hopes ready to expire with him. What indemnification does he receive from men? To be called upon many a time to administer the consolations of Religion to persons who do not believe it; to be the refuge of the poor, with nothing to give them; to be sometimes persecuted for his very virtues; to see his conflicts treated with contempt, his best-intentioned actions mis-interpreted into artifice, his virtues transformed into vices, his religion turned into ridicule. Such are the duties imposed, and such the recompense which the World bestows on the men whose lot it envies.

This is what I have assumed the courage to pro-

pose, for the happiness of the People, and of the principal orders of the State, in so far as I have been permitted to submit my ideas to the public eye. Many Philosophers and Politicians have declaimed against the disorders of Society without troubling themselves to enquire into their causes, and still less into the remedies which might be applied. Those of the greatest ability have viewed our evils only in detail, and have recommended palliatives merely. Some have proscribed luxury ; others give no quarter to celibacy, and would load with the charge of a family persons who have not the means of supplying their personal necessities. Some are for incarcerating all the beggars ; others would prohibit the wretched women of pleasure to appear in the streets. They would act in the manner which that physician does, who in order to cure the pimples on the body of a person ought of order, uses all his skill to force back the humours. Politicians, you apply the remedy to the head, because the pain is in the forehead ; but the mischief is in the nerves : it is for the heart you must provide a cure ; it is the People whose health you must endeavour to restore.

- Should some great Minister, animated with a noble ambition to procure for us internal happiness, and to extend our power externally, have the courage to undertake a re-establishment of things, he must in his course of procedure imitate that of Nature. She acts in every case slowly, and by means of re-actions. I repeat it, the cause of the prodigious power of gold, which has robbed the People at once of their
morality

morality and of their subsistence, is in the venality of public employments. That of the beggary which at this day extends to seven millions of subjects, consists in the enormous accumulation of landed and official property. That of female prostitution is to be imputed, on the one hand, to extreme indigence; and on the other, to the celibacy of two millions of men. The unprofitable superabundance of the idle and censorious burghers in our second and third-rate cities, arises from the imposts which degrade the inhabitants of the country. The prejudices of the nobility are kept alive by the resentments of those who want the advantage of birth; and all these evils, and others innumerable, physical and intellectual, spring up out of the misery of the People. It is the indigence of the People which produces such swarms of players, courtezans, highwaymen, incendiaries, licentious scholars, calumniators, flatterers, hypocrites, mendicants, kept-mistresses, quacks of all conditions, and that infinite multitude of corrupted wretches, who, incapable of coming to any thing by their virtues, endeavour to procure bread and consideration by their vices. In vain will you oppose to these plans of finance, projects of equalization of taxes and tithes, of ordinances of Police, of arrets of Parliament; all your efforts will be fruitless. The indigence of the People is a mighty river, which is every year collecting an increase of strength, which is sweeping away before it every opposing mound, and which will issue in a total subversion of order and government.

To this physical cause of our distresses must be added another, purely moral! I mean our education.

I shall venture to suggest a few reflections on this subject, though it far exceeds my highest powers : but if it be the most important of our abuses, it appears to me, on the other hand, the most easily susceptible of reformation ; and this reform appears to me so absolutely necessary, that without it all the rest goes for nothing.



STUDY FOURTEENTH.

OF EDUCATION.

“**T**O what higher object,” says *Plutarch*,* “could
 “ *Numa* have directed his attention, than to
 “ the culture of early infancy, and to uniformity in
 “ the treatment of young persons; in the view of
 “ preventing the collision of different manners, and
 “ turbulency of spirit arising from diversity of na-
 “ ture? Thus he proposed to harmonize the minds
 “ of men, in a state of maturity, from their having
 “ been, in childhood, trained in the same habits of
 “ order, and cast into the same mould of virtue.
 “ This, independent of other advantages, greatly
 “ contributed likewise to the support of the Laws of
 “ *Lycurgus*; for respect to the oath, by which the
 “ Spartans had bound themselves, must have pro-
 “ duced a much more powerful effect, from his hav-
 “ ing by early instruction and nurture *dyled in the*
 “ *wool*, if I may use the expression, the morals of
 “ the young, and made them suck in with the milk
 “ from their nurse’s breast the love of his Laws and
 “ Institutions.”

Here is a decision which completely condemns our
 mode of education, by pronouncing the elogium of

* Comparison of *Numa* and *Lycurgus*.

that of Sparta. I do not hesitate a single moment to ascribe to our modern education, the restless, ambitious, spiteful, pragmatical, and intolerant spirit of most Europeans. The effects of it are visible in the miseries of the Nations. It is remarkable, that those which have been most agitated internally and externally, are precisely the Nations among which our boasted style of education has flourished the most. The truth of this may be ascertained, by stepping from country to country, from age to age. Politicians have imagined, that they could discern the cause of public misfortunes in the different forms of Government. But Turkey is quiet, and England is frequently in a state of agitation. All political forms are indifferent to the happiness of a State, as has been said, provided the people are happy. We might have added, and provided the children are so likewise.

The Philosopher *Laloubere*, Envoy from *Louis XIV.* to Siam, says, in the account which he gives of his mission, that the Asiatics laugh us to scorn, when we boast to them of the excellence of the Christian Religion, as contributing to the happiness of States. They ask, on reading our Histories, How it is possible that our Religion should be so humane, while we wage war ten times more frequently than they do? What would they say then did they see among us our perpetual law-suits, the malicious censoriousness and calumny of our societies, the jealousy of corps, the quarrels of the populace, the duels of the better sort, and our animosities of every kind, nothing similar to which is to be seen in Asia, in Africa, among the Tartars, or among Savages, on the testimony of mission-
naries

narics themselves? For my own part, I discern the cause of all these particular and general disorders in our ambitious education. When a man has drunk, from infancy upward, into the cup of ambition, the thirst of it cleaves to him all his life long, and it degenerates into a burning fever at the very feet of the altars.

It is not Religion assuredly which occasions this. I cannot explain how it comes to pass, that kingdoms calling themselves Christian should have adopted ambition as the basis of public education. Independently of their political constitution, which forbids it to all those of their subjects who have not money, that is to the greatest part of them, there is no passion so uniformly condemned by Religion. We have observed, that there are but two passions in the heart of Man, love and ambition. Civil Laws denounce the severest punishment against the excesses of the first: they repress, as far as their power extends, the more violent emotions of it. Prostitution is branded with infamous penalties; and in some countries adultery is punished even with death. But these same Laws meet the second more than half way; they every where propose to it prizes, rewards and honours. These opinions force their way, and exercise dominion, in cloisters themselves. It is a grievous scandal to a convent if the amorous intrigues of a monk happen to take air; but what elogiums are bestowed on those which procure for him a cardinal's hat! What raillery, imprecation, and malediction, are the portion of imprudent weakness! What gentle and honourable epithets are applied to audacious craft! Noble emulation,

emulation, love of glory, spirit, intelligence, merit rewarded. With how many glorious appellations do we palliate intrigue, flattery, simony, perfidy, and all the vices which walk, in all States, in the train of the ambitious !

This is the way in which the World forms it's judgments ; but Religion, ever conformable to Nature, pronounces a very different decision on the characters of these two passions. Jesus invites the communications of the frail Samaritan woman, he pardons the adulteress, he absolves the female offender who bathed his feet with her tears ; but hear how he inveighs against the ambitious :—" Wo unto you, " Scribes and Pharisees, for ye love the uppermost " seats in the synagogues, and the chief places at " feasts, and greetings in the markets, and to be " called of men, Rabbi ! Wo unto you, also, ye " Lawyers ; for ye lade men with burdens grievous to " be borne, and ye yourselves touch not the burdens " with one of your fingers ! Wo unto you, Lawyers, " for ye have taken away the key of knowledge : ye " entered not in yourselves, and them that were en- " tering in ye hindered !" and so on.* He declares to them that notwithstanding their empty honours in this World, harlots should go before them into the kingdom of God. He cautions us, in many places, to be on our guard against them ; and intimates that we should know them by their fruits. In pronouncing decisions so different from ours, He judges our passions, according to their natural adaptations. He pardons prostitution, which is in itself a vice, but

* Luke xi. 43, &c.

which after all is a frailty only, relatively to the order of Society ; and He condemns, without mercy, the sin of ambition, as a crime which is contrary at once to the order of Society, and to that of Nature. The first involves the distress of only two guilty persons, but the second affects the happiness of Mankind.

To this our Doctors reply, that the only object pursued in the education of children, is the inspiring them with a virtuous emulation. I do not believe there is such a thing in our Colleges as exercises of virtue, unless it be to prescribe to the students, on this subject, certain themes or amplifications. But a real ambition is taught, by engaging them to dispute the first place in their several classes, and to adopt a thousand intolerant systems. Accordingly, when they have once got the key of knowledge in their pocket, they resolutely determine, like their masters, to let no one enter but by their door.

Virtue and ambition are absolutely incompatible. The glory of ambition is to mount, and that of virtue is to descend. Observe how JESUS CHRIST reprimands his Disciples when they asked him who should be the first among them. He takes a little child, and places him in the midst : Not, surely, a child from our schools. Ah ! when He recommends to us the humility so suitable to our frail and miserable condition, it is because He did not consider that power, even supreme, was capable of constituting our happiness in this World ; and it is worthy of being remarked, that He did not confer the superiority over the rest on the Disciple whom he loved the most ; but as a reward to the love of him who had been faithful

unto death, He bequeathed to him, with his dying breath, his own mother as a legacy.

This pretended emulation, instilled into children, renders them for life intolerant, vain-glorious, tremblingly alive to the slightest censure, or to the meanest token of applause from an unknown person. They are trained to ambition, we are told, for their good, in order to their prospering in the World; but the cupidity natural to the human mind is more than sufficient for the attainment of that object. Have merchants, mechanics, and all the lucrative professions, in other words, all the conditions of Society; have they need of any other stimulus? Were ambition to be instilled into the mind of only one child, destined at length to fill a station of high importance, this education, which is by no means exempted from inconveniencies, would be adapted at least to the career which the young man had in prospect. But by infusing it into all, you give each individual as many opponents as he has got companions; you render the whole unhappy, by means of each other. Those who are incapable of rising by their talents, endeavour to insinuate themselves into the good graces of their masters by flattery, and to supplant their equals by calumny. If these means succeed not, they conceive an aversion for the objects of their emulation, which, to their comrades, has all the value of applause, and becomes to themselves a perpetual source of depression, of chastisement, and of tears.

This is the reason that so many grown men, endeavour to banish from their memory the times and the objects of their early studies, though it be natural

ral to the heart of Man to recollect with delight the epochs of infaney. How many behold, in the maturity of life, the bowers of ofiers and the rustic canopies which served for their infant sleeping and dining apartments, who could not look without abhorrence upon a *Turfelm*, or a *Despauter* ! I have no doubt that those disgusts of early education, extend a most baleful influence to that love with which we ought to be animated toward Religion, because it's elements, in like manner, are displayed only through the medium of gloom, pride and inhumanity.

The plan of most masters consists above all in composing the exterior of their pupils. They form on the same model, a multitude of characters which Nature had rendered essentially different. One will have his disciples to be grave and stately, as if they were so many little presidents ; others, and they are the most numerous, wish to make theirs alert and lively. One of the great burdens of the lesson is an incessant fillip of : " Come on, make haste, don't be lazy." To this impulsion simply I ascribe the general giddiness of our youth, and of which the Nation is accused. It is the impatience of the master which in the first instance produces the precipitancy of the scholars. It afterwards acquires strength in the commerce of the World, from the impatience of the women. But through the progress of human life, Is not reflection of much higher importance than promptitude ? How many children are destined to fill situations which require seriousness and solemnity ? Is not reflection the basis of prudence, of temperance, of wisdom, and of most of the other moral qualities ? For my own
part

part I have always seen honest people abundantly tranquil, and rogues always alert.

There is in this respect a very perceptible difference between two children, the one of whom has been educated in his Father's house, and the other at a public school. The first is beyond all contradiction more polite, more ingenuous, less jealously disposed; and from this single circumstance, that he has been brought up without the desire of excelling any one, and still less of surpassing himself, according to our great fashionable phraseology, but which is as destitute of common sense as many others of the kind. Is not a child, influenced by the emulation of the schools, under the necessity of renouncing it, from the very first step he makes in the World, if he means to be supportable to his equals, and to himself? If he proposes to himself no other object but his own advancement, Will he not be afflicted at the prosperity of another? Will he not, in the course of his progress, be liable to have his mind torn with the aversions, the jealousies and the desires, which must deprave it, both physically and morally? Do not Philosophy and Religion impose on him the necessity of exerting himself every day of his life, to eradicate those faults of education? The World itself obliges him to mask their hideous aspect. Here is a fine perspective opened to human life, in which we are constrained to employ the half of our days in destroying, with a thousand painful efforts, what had been raising up in the other with so many tears and so much parade.

We have borrowed those vices from the Greeks,
without

without being aware that they had contributed to their perpetual divisions, and to their final ruin. The greatest part at least of their exercises, had the good of their Country as the leading object. If there were proposed among the Greeks prizes for superiority in wrestling, in boxing, in throwing the quoit, in foot and chariot races, it was because such exercises had a reference to the art of war. If they had others established for the reward of superior eloquence, it was because that art served to maintain the interests of Country, from city to city, or in the general Assemblies of Greece. But to what purpose do we employ the tedious and painful study of dead languages, and of customs foreign to our Country? Most of our institutions, with relation to the Ancients, have a striking resemblance to the paradise of the Savages of America. Those good people imagine that after death the souls of their compatriots migrate to a certain country, where they hunt down the souls of beavers with the souls of arrows, walking over the soul of snow with the soul of rackets, and that they dress the soul of their game in the soul of pots. We have in like manner the images of a Coliseum, where no spectacles are exhibited; images of peristyles and public squares in which we are not permitted to walk; images of antique vases in which it is impossible to put any liquor, but which contribute largely to our images of grandeur and patriotism. The real Greeks, and the real Romans, would believe themselves among us to be in the land of their shades. Happy would it have been for us had we borrowed from them vain images only, and not naturalized in

our Country their real evils, by transplanting thither the jealousies, the hatreds, and the vain emulations which rendered them miserable.

It was *Charlemagne*, we are told, who instituted our course of studies; and some say it was in the view of dividing his subjects, and of giving them employment. He has succeeded in this to a miracle. Seven years devoted to *humanity* or *classical learning*, two to *Philosophy*, three to *Theology*: twelve years of languor, of ambition, and of self-conceit; without taking into the account the years which well-meaning parents double upon their children, to make sure work of it as they allege. I ask whether on emerging thence a student is, according to the denomination of those respective branches of study, more *humane*, more of a *philosopher*, and *believes* more in God, than an honest peasant who has not been taught to read? What good purpose then does all this answer to the greatest part of Mankind? What benefit do the majority derive from this irksome course, on mixing with the World, toward perfecting their own intelligence, and even toward purity of diction. We have seen, that the classical Authors themselves have borrowed their illumination only from Nature, and that those of our own Nation who have distinguished themselves the most in literature and in the sciences, such as *Descartes*, *Michael Montaigne*, *J. J. Rousseau*, and others, have succeeded only by deviating from the track which their models pursued, and frequently by pursuing the directly opposite path. Thus it was that *Descartes* attacked and subverted the philosophy of *Aristotle*: you would be tempted to say, that Eloquence

quence and the Sciences are completely out of the province of our Gothic Institutions.

I acknowledge at the same time that it is a fortunate circumstance for many children, those who have wicked parents, that there are colleges; they are less miserable there than in the father's house. The faults of masters being exposed to view, are in part repressed by the fear of public censure; but it is not so as to those of their parents. For example, the pride of a man of letters is loquacious, and sometimes instructive; that of an ecclesiastic is clothed with dissimulation, but flattering; that of a man of family is lofty, but frank; that of a clown is insolent, but natural: but the pride of a warm tradesman is fullen and stupid; it is pride at it's ease, pride in a night-gown. As the cit is never contradicted, except it be by his wife, they unite their efforts to render their children unhappy, without so much as suspecting that they do so. Is it credible that in a society, the men of which all moralists allow to be corrupted, in which the citizens maintain their ground only by the terror of the Laws, or by the fear which they have of each other, feeble and defenceless children should not be abandoned to the discretion of tyranny? Nothing can be conceived so ignorant, and so conceited, as the greatest part of tradesmen; among them it is that folly shoots out spreading and profound roots. You see a great many of this class, both men and women, dying of apoplectic fits, from a too sedentary mode of life; from eating beef, and swallowing strong broths, when they are out of order, without suspecting for a moment that such a regimen was

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pernicious.

pernicious. Nothing can be more wholesome say they ; they have always seen their Aunts do so. Hence it is that a multitude of false remedies and of ridiculous superstitions, maintain a reputation among them, long after they have been exploded in the World. In their cup-boards is still carefully treasured up the *cassia*, a species of poison, as if it were an universal panacea. The regimen of their unfortunate children resembles that which they employ where their own health is concerned ; they form them to melancholy habits ; all that they make them learn, up to the Gospel itself, is with the rod over their head ; they fix them in a sedentary posture all the day long, at an age when Nature is prompting them to stir about, for the purpose of expanding their form. Be good children, is the perpetual injunction ; and this goodness consists in never moving a limb. A woman of spirit who was fond of children, took notice one day, at the house of a shop-keeper in St. Denis-street, of a little boy and girl who had a very serious air. “ Your children are very grave,” said she to the mother.... “ Ah ! Madam,” replied the sagacious shop-dame, “ it is not for want of whipping “ if they are not so.”

Children rendered miserable in their sports, and in their studies, become hypocritical and reserved before their fathers and mothers. At length however they acquire stature. One night the daughter puts on her cloke, under pretence of going to evening-prayers, but it is to give her lover the meeting : by and by her shapes divulge the secret ; she is driven from her father's house, and comes upon the town.

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Some fine morning the son enlists for a soldier. The father and mother are ready to go distracted. We spared nothing, say they, to procure them the best of education: they had masters of every kind: Fools! you forgot the essential point; you forgot to teach them to love you.

They justify their tyranny by that cruel adage: *Children must be corrected; human nature is corrupted.* They do not perceive that they themselves, by their excessive severity, stand chargeable with the corruption,* and that in every country where fathers are good, the children resemble them.

* To certain species of chastisement I ascribe the physical and moral corruption not only of children, and of several orders of monks, but of the Nation itself. You cannot move a step through the streets without hearing nurses and mothers menacing their little charge with, *I shall give you a flogging.* I have never been in England, but I am persuaded, that the ferocity imputed to the English must proceed from some such cause. I have indeed heard it affirmed, that punishment by the rod was more cruel, and more frequent, among them, than with us. See what is said on this subject by the illustrious Authors of the *Spectator*, a Work which has beyond contradiction greatly contributed to soften both their manners and ours. They reproach the English Nobility for permitting this character of infamy to be impressed on their children. Consult, particularly, No. CLVII. of that Collection, which concludes thus: "I would not here be supposed to have said, " that our learned men of either robe, who have been whipped at " school, are not still men of noble and liberal minds; but I am " sure they had been much more so than they are, had they never suffered that infamy."

Government ought to proscribe this kind of chastisement, not only in the public schools, as Russia has done, but in convents, on shipboard, in private families, in boarding houses: it corrupts at once fathers, mothers, preceptors, and children. I could quote terrible re-actions of it, did modesty permit. Is it not very as-

I could demonstrate, by a multitude of examples, that the depravation of our most notorious criminals

nishing, that men in other respects of a staid and serious exterior, should lay down as the basis of a Christian education, the observance of gentleness, humanity, chastity; and punish timid and innocent children with the most barbarous, and the most obscene of all chastisements? Our men of letters who have been employed in reforming abuses for more than a century past, have not attacked this with the severity which it deserves. They do not pay sufficient attention to the miseries of the rising generation. It would be a question of right, the discussion of which were highly interesting and important, namely, Whether the State could permit the right of inflicting infamous punishment, to persons who have not the power of life and death? It is certain that the infamy of a citizen produces re-actions more dangerous to Society, than his own death merely. It is nothing at all, we are told, they are but children; but for this very reason, because they are children, every generous spirit is bound to protect them, and because every miserable child becomes a bad man.

At the same time, it is far from being my intention, in what I have said respecting masters in general, to render the profession odious. I only mean to suggest to them, that those chastisements, the practice of which they have borrowed from the corrupted Greeks of the Lower Empire, exercise an influence much more powerful than they are aware of, on the hatred which is borne to them, as well as to the other ministers of Religion, monks as well as the regular clergy, by a people more enlightened than in former times. After all, it must be granted, that masters treat their pupils as they themselves were treated. One set of miserable beings are employed in forming a new set, frequently without suspecting what they are doing. All I aim at present to establish is this, That man has been committed to his own foresight; that all the ill which he does to his fellow-creatures, recoils sooner or later upon himself. This re-action is the only counterpoise capable of bringing him back to humanity. All the Sciences are still in a state of infancy; but that of rendering men happy has not as yet so much as seen the light, not even in China, whose politics are so far superior to ours.

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began with the cruelty of their education, from *Guillevry* down to *Desfrues*. But, to take leave once for all of this horrid perspective, I conclude with a single reflection : namely, if human nature were corrupted, as is alleged by those who arrogate to themselves the power of reforming it, children could not fail to add a new corruption to that which they find already introduced into the World, upon their arrival in it. Human Society would accordingly speedily reach the term of it's dissolution. But children, on the contrary, protract and put off that fatal period, by the introduction of new and untainted souls. It requires a long apprenticeship to inspire them with a taste for our passions and extravagancies. New generations resemble the dews and the rains of Heaven, which refresh the waters of rivers slackened in their course, and tending to corruption ; change the sources of a river, and you will change it in the stream ; change the education of a People, and you will change their character and their manners.

We shall hazard a few ideas on a subject of so much importance, and shall look for the indications of them in Nature. On examining the nest of a bird, we find in it not only the nutriments which are most agreeable to the young, but from the softness of the downs with which it is lined ; from it's situation, whereby it is sheltered from the cold, from the rain, and from the wind ; and from a multitude of other precautions, it is easy to discern that those who constructed it, collected around their brood, all the intelligence, and all the benevolence of which they were capable. The father too sings at a little

distance from their cradle, prompted rather, as I suppose, by the sollicitudes of paternal affection, than by those of conjugal love; for this last sentiment expires in most, as soon as the process of hatching begins. If we were to examine, under the same aspect, the schools of the young of the human species, we should have a very indifferent idea of the affection of their parents. Rods, whips, stripes, cries, tears, are the first lessons given to human life: we have here and there it is true a glimpse of reward, amidst so many chastisements; but, symbol of what awaits them in Society, the pain is real and the pleasure only imaginary.

It is worthy of being remarked that of all the species of sensible beings, the human species is the only one whose young are brought up, and instructed, by dint of blows. I would not wish for any other proof of an original depravation of Mankind. The European brood, in this respect, surpasses all the Nations of the Globe; as they likewise do in wickedness. We have already observed, on the testimony of missionaries themselves, with what gentleness Savages rear their children, and what affection the children bear to their parents in return.

The Arabs extend their humanity to the very horses; they never beat them; they manage them by means of kindness and caresses, and render them so docile, that there are no animals of the kind in the whole World once to be compared with them in beauty and in goodness. They do not fix them to a stake in the fields, but suffer them to pasture at large around their habitation, to which they come running
the

the moment that they hear the sound of the master's voice. Those tractable animals resort at night to their tents, and lie down in the midst of the children, without ever hurting them in the slightest degree. If the rider happens to fall while a-courfing, his horse stands still instantly, and never stirs till he has mounted again. These people, by means of the irresistible influence of a mild education, have acquired the art of rendering their horses the first courfers of the universe.

It is impossible to read without being melted into tears, what is related on this subject by the virtuous Consul *d'Hervieux*, in his journey to Mount Lebanon. The whole stock of a poor Arabian of the Desert consisted of a most beautiful mare. The French Consul at Saïd offered to purchase her, with an intention to send her to his master *Louis XIV.* The Arab pressed by want hesitated a long time; but at length consented, on condition of receiving a very considerable sum which he named. The Consul, not daring without instructions, to give so high a price, wrote to Versailles for permission to close the bargain on the terms stipulated. *Louis XIV.* gave orders to pay the money. The Consul immediately sent notice to the Arab, who soon after made his appearance, mounted on his magnificent courser, and the gold which he had demanded was paid down to him. The Arab, covered with a miserable rug, dismounts, looks at the money; then, turning his eyes to the mare, he sighs, and thus accosts her: "To whom am I going
" to yield thee up? To Europeans, who will tie thee
" close, who will beat thee, who will render thee
" miserable;

“ miserable : return with me, my beauty, my darling, my jewel ! and rejoice the hearts of my children !” As he pronounced these words, he sprang upon her back, and scampered off toward the Desert.

If, with us, fathers beat their children, it is because they love them not ; if they send them abroad to nurse as soon as they come into the World, it is because they love them not ; if they place them as soon as they have acquired a little growth, in boarding-schools and colleges, it is because they love them not ; if they procure for them situations out of their State, out of their Province, it is because they love them not : if they keep them at a distance from themselves at every epoch of life, it must undoubtedly be, because they look upon them as their heirs.

I have been long enquiring into the cause of this unnatural sentiment, but not in our books ; for the Authors of these, in the view of paying court to fathers who buy their Works, insist only on the duties of children ; and if sometimes they bring forward those of fathers, the discipline which they recommend to them, respecting their children, is so gloomy and severe, that it looks as if they were furnishing parents with new means of rendering themselves hateful to their offspring.

This parental apathy is to be imputed to the disorderly state of our manners, which has stifled among us all the sentiments of Nature. Among the Ancients, and even among Savages, the perspective of social life presented to them a series of employments, from infancy up to old age, which among them was the

the era of the higher magistracies, and of the priesthood. The hopes of their religion, at that period, interposed to terminate an honourable career, and concluded with rendering the plan of their life conformable to that of Nature. Thus it was that they always kept up in the soul of their citizens that perspective of infinity which is so natural to the heart of Man. But venality and debauched manners having subverted, among us, the order of Nature, the only age of human existence which has preserved its rights is that of youth and love. This is the epoch to which all the citizens direct their thoughts. Among the Ancients the aged bore rule; but with us the young people assume the government. The old are constrained to retire from all public employment. Their dear children then pay them back the fruits of the education which they had received from them.

Hence therefore it comes to pass, that a father and mother restricting with us, the epoch of their felicity to the middle period of life, cannot without uneasiness behold their children approaching toward it, just in proportion as they themselves are withdrawing from it. As their faith is almost, or altogether, extinguished, Religion administers to them no consolation. They behold nothing but death closing their perspective. This point of view renders them sullen, harsh, and frequently cruel. This is the reason that, with us, parents do not love their children, and that our old people affect so many frivolous tastes, to bring themselves nearer to a generation which is repelling them.

Another consequence of the same state of manners is, that we have nothing of the spirit of patriotism among

among us. The Ancients on the contrary had a great deal of it. They proposed to themselves a noble recompense in the present, but one still much more noble in the future. The Romans, for example, had oracles which promised to their City that she should become the Capital of the World, and she actually became so. Each citizen in particular flattered himself with the hope of exercising an influence over her destiny, and of presiding one day as a tutelary deity over that of his own posterity. Their highest ambition was to see their own age honoured and distinguished above every other age of the Republic. Those among us who have any ambition that regards futurity, restrict it to the being themselves distinguished by the age in which they live, for their knowledge or their philosophy. In this nearly terminates our natural ambition, directed as it is by our mode of education.

The Ancients employed their thoughts in prognosticating the character and condition of their posterity ; and we revolve what our Ancestors were. They looked forward ; and we look backward. We are in the State, like passengers embarked against their will on board a vessel ; we look toward the poop and not to the prow ; to the land from which we are taking our departure, and not to that on which we hope to arrive. We collect with avidity Gothic manuscripts, monuments of chivalry, the medallions of *Childeric* ; we pick up with ardour all the worn out fragments of the ancient fabric of our State vessel. We pursue them in a backward direction as far as the eye can carry us. Nay we extend this solicitude about Antiquity to monuments which are foreign to us ; to those

those of the Greeks and Romans. They are like our own the wrecks of their vessels, which have perished on the vast Ocean of Time, without being able to get forward to us. They would have been accompanying us, nay they would have been out-failing us, had skilful pilots always stood at the helm. It is still possible to distinguish them from their shattered fragments. From the simplicity of her construction, and the lightness of her frame, that must have been the Spartan frigate. She was made to swim eternally; but she had no bottom; she was overtaken by a dreadful tempest; and the Helots were incapable of restoring the equilibrium. From the loftiness of her quarter-galleries, you there distinguish the remains of the mighty first-rate of proud Rome. She was unable to support the weight of her unwieldy turrets; her cumbersome and ponderous upper-works overset her. The following inscriptions might be engraved on the different rocks against which they have made shipwreck :

Love of Conquest. Accumulation of Property. Venality of Employments. And, above All : Contempt of the People.

The billows of Time still roar over their enormous wrecks, and separate them from detached planks, which they scatter among modern Nations for their instruction. Those ruins seem to address them thus :

“ We are the remains of the ancient government of
 “ the Tuscans, of Dardanus, and of the grand-children of Numitor. The States which they have
 “ transmitted to their descendants still support Nations of Mankind; but they no longer have the
 “ same languages, nor the same religions, nor the
 “ same

“ same civil dynasties. Divine Providence, in order
“ to save men from shipwreck, has drowned the pi-
“ lots, and dashed the ship to pieces.”

We admire on the contrary in our frivolous Sciences, their conquests, their vast and useless buildings, and all the monuments of their luxury, which are the very rocks on which they perished. See, to what our studies, and our patriotisin, are leading us. If posterity is taken up with the Ancients, it is because the Ancients laboured for posterity : but if we do nothing for ours assuredly they will pay no attention to us. They will talk incessantly as we do, about the Greeks and Romans, without wasting a single thought upon their fathers.

Instead of falling into raptures over Greek and Roman medallions, half devoured by the teeth of Time, would it not be fully as agreeable, and much more useful, to direct our views and employ our conjectures, on the subject of our fresh, lively, plump children, and to try to discover in their several inclinations, who are to be the future co-operators in the service of their Country ? Those who in their childish sports are fond of building, will one day rear her monuments. Among those who take delight in managing their boyish skirmishes, will be formed the *Epaminondas*es and the *Scipios* of future times. Those who are seated upon the grass, the calm spectators of the sports of their companions, will in due time become excellent Magistrates, and Philosophers, the complete masters of their own passions. Those who in their restless course love to withdraw from the rest, will be noted travellers and founders of colonies,
who

who shall carry the manners, and the language of France, to the Savages of America, or into the interior of Africa itself.

If we are kind to our children they will bless our memory ; they will transmit, unaltered, our customs, our fashions, our education, our government, and every thing that awakens the recollection of us, to the very latest posterity. We shall be to them beneficent deities who have wrought their deliverance from Gothic barbarism. We should gratify the innate taste of infinity still better, by launching our thoughts into a futurity of two thousand years, than into a retrospect of the same distance. This manner of viewing, more conformable to our divine nature, would fix our benevolence on sensible objects which do exist, and which still are to exist.* We should secure to ourselves,

* There is a sublime character in the Works of the DIVINITY. They are not only perfect in themselves, but they are always in a progressive state toward perfection. We have suggested some thoughts respecting this Law, in speaking of the harmonies of plants. A young plant is of more value than the seed which produced it ; a tree bearing flowers and fruits is more valuable than the young plant ; finally, a tree is never more beautiful than when, declined into years, it is surrounded with a forest of young trees, sprouted up out of it's seeds. The same thing holds good as to Man. The state of an embryo is superior to that of a non-entity ; that of infancy to the embryo ; adolescence is preferable to infancy ; and youth, the season of loves, more important than adolescence. Man in a state of maturity, the head of a family, is preferable to a young man. The old age which encircles him with a numerous posterity ; which, from it's experience, introduces him into the counsels of Nations ; which suspends in him the dominion of the passions, only to give more energy to that of reason : the old age which seems to rank him among superior beings,

ourselves, as a support to an old age of sadness and neglect, the gratitude of the generation which is advancing to replace us; and, by providing for their happiness and our own, we should combine all the means in our power toward promoting the good of our Country.

In order to contribute my little mite toward so blessed a revolution, I shall hazard a few more hasty ideas. I proceed on the supposition then, that I am empowered to employ usefully a part of the twelve years which our young people waste at schools and colleges. I reduce the whole time of their education to three epochs, consisting of three years each. The first should commence at the age of seven years, as among the Lacedemonians, and even earlier: a child is susceptible of a patriotic education as soon as he is able to speak and to walk. The second shall begin with the period of adolescence; and the third end with it, toward the age of sixteen, an age when a young man may begin to be useful to his Country, and to assume a profession.

I would begin with disposing, in a central situation in Paris, a magnificent edifice, constructed internally in form of a circular amphitheatre, divided into ascending rows. The masters, to be entrusted with the charge of the national education, should be stationed below, in the centre; and above, I would

ings, from the multiplied hopes which the practice of virtue and the Laws of Providence have bestowed upon him, is of more value than all the other ages of life put together. I could wish it were so with the maturity of France, and that the age of *Louis XVI.* might surpass all that have preceded it.

have

have several rows of galleries, in order to multiply places for the auditors. On the outside, and quite round the building, I would have wide porticos, story above story, for the reception and accommodation of the People. On a pediment over the grand entrance these words might be inscribed :

NATIONAL SCHOOLS.

I have no need to mention, that as the children pass three years in each epoch of their education, one of these edifices would be requisite for the instruction of the generation of the year, which restricts to nine the number of monuments destined to the general education of the Capital.

Round each of these amphitheatres there should be a great park, stored with the plants and trees of the Country, scattered about with artificial arrangement, as in the fields and the woods. We should there behold the primrose and the violet shining around the root of the oak ; the apple and pear-tree blended with the elm and the beech. The bowers of innocence should be no less interesting than the tombs of virtue.

If I have expressed a wish to have monuments raised to the glory of those by whom our climate has been enriched with exotic plants, it is not that I prefer these to the plants of our own Country, but it is in the view of rendering to the memory of those citizens, a part of the gratitude which we owe to Nature. Besides, the most common plants in our plains, independent of their utility, are those which recal to us the most agreeable sensations : they do not transport us beyond seas as foreign plants do ; but recal us

home, and restore us to ourselves. The feathered sphere of the dandelion brings to my recollection the places where, seated on the grass with children of my own age, we endeavoured to sweep off by one whiff of breath, all it's plumage, without leaving a single tuft behind. Fortune in like manner has blown upon us, and has scattered abroad our downy-pinioned circles over the face of the whole earth. I call to remembrance, on seeing certain gramineous plants in the ear, the happy age when we conjugated on their alternate ramifications, the different tenses and moods of the verb *aimer* (to love). We trembled at hearing our companions finish, after all the various inflexions, with *je ne vous aime plus*, (I no longer love you). The finest flowers are not always those for which we conceive the highest affection. The moral sentiment determines at the long run all our physical tastes. The plants which seem to me the most unfortunate, are at this day those which awaken in me the most lively interest. I frequently fix my attention on a blade of grass, at the top of an old wall, or in a scabious tossed about by the winds in the middle of a plain. Oftener than once, at sight, in a foreign land, of an apple-tree without flowers, and without fruit, have I exclaimed: "Ah! why has Fortune denied
 " to thee, as she has done to me, a little earth in thy
 " native land?"

The plants of our Country recal the idea of it to us, wherever we may be, in a manner still more affecting than it's monuments. I would spare no cost therefore to collect them around the children of the Nation. I would make their school a spot charming
 as.

as their tender age, that when the injustice of their patrons, of their friends, of their relations, of fortune, may have crushed to pieces in their hearts all the ties of Country, the place in which their childhood had enjoyed felicity might be still their Capitol.

I would decorate it with pictures. Children as well as the vulgar prefer painting to sculpture, because this last presents to them too many beauties of convention. They do not love figures completely white, but with ruddy cheeks and blue eyes, like their images in plaster. They are more struck with colours than with forms. I could wish to exhibit to them the portraits of our infant Kings. *Cyrus*, brought up with the children of his own age, formed them into heroes; ours should be educated at least with the images of our Sovereigns. They would assume, at sight of them, the first sentiments of the attachment which they owe to the Fathers of their Country.

I would present them with pictures after religious subjects; not such as are terrifying, and which are calculated to excite Man to repentance; but those which have a tendency to encourage innocence. Such would be that of the Virgin holding the infant Jesus in her arms. Such would be that of Jesus himself in the midst of children, displaying in their attitudes, and in their features, the simplicity and the confidence of their age, and such as *Le Sacre* would have painted them. Beneath, there might be inscribed these words of JESUS CHRIST himself:

Venite parvulos ad me venire.

Suffer little Children to come to Me.

Were it necessary to represent in this school any act of justice, there might be a painting of the fruitless fig-tree withering away at his command. It would exhibit the leaves of that tree curling up, it's branches twisting, it's bark cracking, and the whole plant struck with terror, perishing under the malediction of the AUTHOR of Nature.

There might be inserted some simple and short inscription from the Gospel, such as this :

Love one another.

Or this :

Come unto Me, all ye that are heavy Laden,
and I will give you Rest.

And that maxim already necessary to the infant mind :

Virtue consists in preferring the Public Good to our Own.

And that other :

In Order to be Virtuous, a Man must resist his Propensities,
his Inclinations, his Tastes, and maintain an incessant Conflict with Himself.

But there are inscriptions to which hardly any attention is paid, and the meaning of which is of much higher importance to children ; these are their own names. Their names are inscriptions which they carry with them wherever they go. It is impossible to conceive the influence which they have upon their natural character. Our name is the first and the last possession which is at our own disposal ; it determines, from the days of infancy, our inclinations ; it employs our attention through life, nay transports us
beyond

beyond the grave. I have still a name left, is the reflection. It is a name that ennobles, or dishonours the earth. The rocks of Greece and of Italy, are neither more ancient, nor more beautiful than those of the other parts of the World; but we esteem them more, because they are dignified by more beautiful names. A medal is nothing but a bit of copper, frequently eaten with rust, but it acquires value from being decorated by an illustrious name.

I could wish therefore to have children distinguished by interesting names. A lad fathers himself upon his name. If it inclines toward any vice, or if it furnishes matter for ridicule, as many of ours do, his mind takes a bias from it. *Bayle* remarks, that a certain Inquisitor named TORRE-CREMADA, or the Burnt-Tower, had in his life-time condemned I know not how many heretics to the flames. A Cordelier of the name of FEU-ARDENT (Ardent-Flame) is said to have done as much. There is a farther absurdity in giving to children, destined to peaceful occupations, turbulent and ambitious names, such as those of *Alexander* and *Cesar*. It is still more dangerous to give them ridiculous names. I have seen poor boys so tormented on this account by their companions, and even by their own parents, from the silly circumstance of a baptismal name, which implied some idea of simplicity and good-nature, that they insensibly acquired from it an opposite character of malignity and ferociousness. Instances of this are numerous. Two of our most satyrical Writers, in Theology and Poesy, were named, the one *BLAISE Pascal*, and the other *COLIN Boileau*. *Colin* implies

nothing sarcastic, said his father. That one word infused the spirit of sarcasm into him. The audacious villainy of *James CLEMENT*, took it's birth perhaps from some jest that passed upon his name.

Government therefore ought to interpose in the business of giving names to children, as they have an influence so tremendous on the characters of the citizens. I could wish likewise that to their baptismal name might be added a surname of some family rendered illustrious by virtue, as the Romans did; this species of adoption would attach the little to the great, and the great to the little. There were at Rome *Scipios* without number in Plebeian families. We might revive, in like manner, among our commonalty, the names of our illustrious families, such as the *Fenelons*, the *Catinats*, the *Montausiers*, and the like.

I would not make use in this school of noisy bells, to announce the different exercises, but of the sound of flutes, of hautboys, and of bag-pipes. Every thing they learned should be versified, and set to music. The influence of these two arts united is beyond all conception. I shall produce some examples of it, taken from the Legislation of a People whose police was the best perhaps in the World; I mean that of Sparta. Hear what *Plutarch* says on the subject, in his life of *Lycurgus*. “*Lycurgus*, then, having
“ taken leave of his Country,” (to escape the calumnies which were the reward of his virtues) “ directed
“ his course first towards Candia, where he studied the
“ Cretan laws and government, and made an acquaintance with the principal men of the Country.
“ Some of their laws he much approved, and re-
“ solved

“ solved to make use of them in his own Country ;
 “ others he rejected. Amongst the persons there,
 “ the most renowned for ability and wisdom in po-
 “ litical affairs, was *Thales*, whom *Lycurgus* by re-
 “ peated importunities and assurances of friendship,
 “ at last persuaded to go over to Lacedemon. When
 “ he came thither, though he professed only to be a
 “ lyric poet, in reality he performed the part of the
 “ ablest legislator. The very songs which he com-
 “ posed were pathetic exhortations to obedience and
 “ concord ; and the sweetness of the music, and the
 “ cadence of the verse, had so powerful and so plea-
 “ sing an effect upon the hearers, that they were in-
 “ sensibly softened and civilized ; and, at last, re-
 “ nouncing their mutual feuds and animosities, united
 “ in the love of humanity and good order. So that
 “ it may truly be said, that *Thales* prepared the way
 “ for *Lycurgus*, by disposing the People to receive his
 “ institutions.”

Lycurgus farther introduced among them the use
 of music, in various species of exercise, and among
 others into the art of war.* “ When their army was
 “ drawn up, and the enemy near, the King sacrificed
 “ a goat, commanded the soldiers to set their gar-
 “ lands upon their heads, and the musicians to play
 “ the tune of the Hymn to *Castor*, and he himself
 “ advancing forward began the Pæan, which served
 “ for a signal to fall on. It was at once a solemn
 “ and a terrible sight, to see them march on to the
 “ combat cheerfully and sedately, without any disor-
 “ der in their ranks, or discomposure in their minds,

* *Plutarch's Life of Lycurgus.*

“measuring their steps by the music of their flutes.
 “Men in this temper were not likely to be possessed
 “with fear, or transported with fury; but they pro-
 “ceeded with a deliberate valour and confidence of
 “success, as if some divinity had sensibly assisted
 “them.”

Thus, considering the difference of modern Nations, music would serve to repress their courage, rather than to excite it; and they had no occasion, for that purpose, of bears-skin caps, nor of brandy, nor of drums.

If music and poetry had so much power at Sparta, to recall corrupted men to the practice of virtue, and afterwards to govern them; What influence would they not have over our children in the age of innocence? Who could ever forget the sacred Laws of Morality, were they set to music, and in verses as enchanting as those of the *Devin du Village*? From similar institutions, there might be produced among us Poets as sublime as the sage *Thales*, or as *Tyrtæus* who composed the Hymn of *Castor*.

These arrangements being made for our children, the first branch of their education should be Religion. I would begin with talking to them about God, in the view of engaging them to fear and love Him, but to fear Him without making Him an object of terror to them. Terrifying views of God generate superstition, and inspire horrible apprehensions of priests and of death. The first precept of Religion is to love God. *Love, and do what you will*, was the saying of a Saint. We are enjoined by Religion to love Him above all things. We are encouraged to address our-
 selves

selves to Him as to a Father. If we are commanded to fear Him, it is only with a relation to the love which we owe Him; because we ought to be afraid of offending the person whom we are bound to love. Besides, I am very far from thinking that a child is incapable of having any idea of God before fourteen years of age, as has been advanced by a Writer whom in other respects I love. Do we not convey to the youngest children sentiments of fear and of aversion, for metaphysical objects which have no existence? Wherefore should they not be inspired with confidence and love for the Being who fills universal Nature with his beneficence? Children have not the ideas of God such as are taught by systems of Theology and Philosophy; but they are perfectly capable of having the sentiment of him, which as we have seen is the reason of Nature. 'This very sentiment has been exalted among them, during the time of the Crusades, to such a height of fervor, as to induce multitudes of them to assume the Cross for the conquest of the Holy Land. Would to God I had preserved the sentiment of the existence of the Supreme Being, and of his principal attributes, as pure as I had it in my earliest years! It is the heart, still more than the understanding, that Religion demands. And which heart, I beseech you, is most filled with the DEITY, and the most agreeable in his sight; that of the child who elevated with the sentiment of Him, raises his innocent hands to Heaven as he stammers out his prayer, or of the schoolman who pretends to explain His Nature?

It is very easy to communicate to children ideas of
God

God and of virtue. The daisies springing up among the grass, the fruits suspended on the trees of their enclosure, should be their first lessons in Theology, and their first exercises of abstinence and of obedience to the Laws. Their minds might be fixed on the principal object of Religion, by the pure and simple recitation of the life of JESUS CHRIST in the Gospel. They would learn in their Creed all that they can know of the nature of GOD, and in the *Pater-noster* every thing that they can ask of Him.

It is worthy of remark, that of all the Sacred Books there is no one which children take in with so much facility as the Gospel. It would be proper to habituate them betimes, in a particular manner, to perform the actions which are there enjoined, without vain-glory, and without any respect to human observation or applause. They ought to be trained up therefore in the habit of preventing each other in acts of friendship, in mutual deference, and in good offices of every kind.

All the children of citizens should be admitted into this National School, without making a single exception. I would insist only on the most perfect cleanliness, were they in other respects dressed but in patches sewed together. There you might see the child of a man of quality, attended by his governor, arrive in an equipage, and take his place by the side of a peasant's child leaning on his little stick, dressed in canvas in the very middle of winter, and carrying in a satchel his little books, and his slice of brown bread for the provision of the whole day. Thus they would both learn to know each other before they came to be separated for ever. The child of the rich
man

man would be instructed to impart of his superfluity, to him who is frequently destined to support the affluent out of his own necessary pittance. These children of all ranks, crowned with flowers, and distributed into choirs, would assist in our public processions. Their age, their order, their songs, and their innocence, would present in these, a spectacle more august than the lackeys of the Great bearing the coats of arms of their masters pasted to wax-tapers, and beyond all contradiction much more affecting than the hedges of soldiers and bayonets with which, on such occasions, a God of Peace is encompassed.

In this school, children might be taught to read and to cypher. Ingenious men have for this effect contrived boards, and methods simple, prompt and agreeable; but schoolmasters have been at great pains to render them useless, because they destroyed their empire, and made education proceed faster than was consistent with their emolument. If you wish children to learn quickly to read, put a sugar-plumb over each of their letters; they will soon have their alphabet by heart; and if you multiply or diminish the number of them, they will soon become arithmeticians. However that may be, they shall have profited wonderfully in this school of their Country, should they leave it without having learned to read, write and cypher; but deeply penetrated with this one truth, that to read, write and cypher, and all the Sciences in the World, are mere nothings; but that to be sincere, good, obliging; to love God and Man, is the only Science worthy of the human heart.

At the second era of education, which I suppose to be about the age of from ten to twelve, when their intellectual powers restlessly stir and press forward to the imitation of every thing that they see done by others, I would have them instructed in the means which men employ in making provision for the wants of Society. I would not pretend to teach them the five hundred and thirty arts and handicrafts which are carried on at Paris, but those only which are subservient to the first necessities of human life, such as agriculture, the different processes employed in making bread, the arts which, in the pride of our hearts, we denominate mechanical, such as those of spinning flax and hemp, of weaving these into cloth, and that of building houses. To these I would join the elements of the natural Sciences, in which those various handicrafts originated, the elements of Geometry, and the experiments of Natural Philosophy, which have invented nothing in this respect, but which explain their processes with much pomp and parade.

I would likewise have them made acquainted with the liberal arts, such as those of drawing, of architecture, of fortification, not in the view of making painters of them, or architects, or engineers, but to shew them in what manner their habitation is constructed, and how their Country is defended. I would make them observe, as an antidote to the vanity which the Sciences inspire, that Man, amidst such a variety of arts and operations, has imagined no one thing; that he has imitated in all his productions, either the skill of the animal creation, or the operations

tions of Nature; that his industry is a testimony of the misery to which he is condemned, whereby he is laid under the necessity of maintaining an incessant conflict against the elements, against hunger and thirst, against his fellow men, and what is most difficult of all, against himself. I would make them sensible of these relations of the truths of Religion, to those of Nature; and I would thus dispose them to love the class of useful men who are continually providing for their wants.

I would always endeavour, in the course of this education, to make the exercises of the body go hand in hand with those of the mind. Accordingly, while they were acquiring the knowledge of the useful arts I would have them taught Latin. I would not teach it them metaphysically and grammatically, as in our colleges, and which is forgotten much faster than it was attained, but they should learn it practically. Thus it is that the Polish peasantry acquire it, who speak it fluently all their life-time, though they have never been at college. They speak it in a very intelligible manner, as I know by experience, having travelled through their Country. The use of that language has been I imagine propagated among them by certain exiles from ancient Rome, perhaps *Ovid*, who was sent into banishment among the Sarmatians, their Ancestors, and for the memory of which Poet they still preserve the highest veneration. It is not, say our *Literati*, the Latin of *Cicero*. But what is that to the purpose? It is not because those peasants have not a competent knowledge of the Latin tongue, that they are incapable of speaking the language of *Cicero*;

Cicero ; but because, being slaves, they do not understand the language of liberty. Our French peasants would not comprehend the best translations which could be made of that Author, were they the production even of the University. But a Savage of Canada would take them in perfectly, and better than many Professors of eloquence. It is the tone of soul of the person who listens which gives the comprehension of the language of him who speaks. A project was once formed, I think under *Louis XIV.* of building a city in which no language but Latin was to have been spoken. This must have inconceivably facilitated the study of that tongue ; but the University undoubtedly would not have found it's account in it. Whatever may be in this, I am well assured that two years at most are sufficient for the children of the National School to learn the Latin by practice, especially if in the lectures which they attended, extracts were given from the lives of great men, French and Roman, written in good Latin, and afterwards well explained.

In the third period of Education, nearly about the age when the passions begin to take flight, I would shew to ingenuous youth, the pure and gentle language of them, in the Eclogues and Georgics of *Virgil* ; the philosophy of them, in some of the Odes of *Horace* ; and pictures of their corruption, taken from *Tacitus* and *Suetonius*. I would finish the painting of the hideous excesses into which they plunge Mankind, by exhibiting passages from some Historian of the Lower Empire. I would make them remark how talents, taste, knowledge and eloquence, sunk

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at once among the Ancients, together with manners and virtue. I would be very careful not to fatigue my pupils with reading of this sort; I would point out to them only the more poignant passages, in order to excite in them a desire to know the rest. My aim should be, not to lead them through a course of *Virgil*, of *Horace*, and of *Tacitus*, but a real course of classical learning, by uniting in their studies whatever men of genius have considered as best adapted to the perfecting of human nature.

I would likewise have them practically instructed in the knowledge of the Greek tongue, which is on the point of going into total disuse among us. I would make them acquainted with *Homer*, *principium sapientie & fons*, (the original source of Wisdom) as *Horace* with perfect propriety calls him; with *Herodotus*, the father of History; with some maxims from the sublime book of *Marcus Aurelius*. I would endeavour to make them sensible how at all times talents, virtues, great men, and States, flourished together with confidence in the Divine Providence. But, in order to communicate greater weight to these eternal truths, I would intermingle with them the enchanting studies of Nature, of which they had hitherto seen only some faint sketches in the greatest Writers.

I would make them remark the disposition of this Globe, suspended in a most incomprehensible manner upon nothing, with an infinite number of different Nations in motion over it's solid and over it's liquid surface. I would point out to them, in each climate, the principal plants which are useful to hu-
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man life ; the animals which stand related to those plants, and to their soil, without extending farther. I would then shew them the human race, who alone of all sensible beings are universally dispersed, mutually to assist each other, and to gather at once all the productions of Nature. I would let them see that the interests of Princes are not different from those of other men ; and that those of every Nation are the same with the interests of their Princes. I would speak of the different Laws by which the Nations are governed ; I would lead them to an acquaintance with those of their own Country, of which most of our citizens are entirely ignorant. I would give them an idea of the principal religions which divide the Earth ; and I would demonstrate to them, how highly preferable Christianity is to all the political Laws, and to all the religions of the World, because it alone aims at the felicity of the whole human race. I would make them sensible, that it is the Christian Religion which prevents the different ranks of Society from dashing themselves to pieces by mutual collision, and which gives them equal powers of bearing up under the pressure of unequal weights. From these sublime considerations, the love of their Country would be kindled in those youthful hearts, and would acquire increasing ardor from the spectacle of her very calamities.

I would intermix these affecting speculations with exercises, useful, agreeable, and adapted to the vivacity of their time of life. I would have them taught to swim, not so much by way of security from danger in the event of suffering shipwreck, as in the view of
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assisting persons who may happen to be in that dreadful situation. Whatever particular advantage they might derive from their studies, I would never propose to them any other end but the good of their fellow-creature. They would make a most wonderful progress in these, did they reap no other fruit except that of concord, and the love of Country.

In the beautiful season of the year, when the corn is reaped, about the beginning of September, I would lead them out into the country, embodied under various standards. I would present them with the image of war. I would make them lie on the grass under the shade of forests : there they should themselves prepare their own victuals ; they should learn to attack and to defend a post, to cross a river by swimming ; they should learn the use of fire-arms, and at the same time to practise the evolutions borrowed from the tactics of the Greeks, who are our masters in every branch of knowledge. I would bring into disrepute, by means of these military exercises, the taste for fencing, which renders the soldiery formidable only to citizens, an art useless and even hurtful in war, reprobated by all great Commanders, and derogatory to courage, as *Philopæmen* alleged. “ In
“ my younger days,” says *Michael Montaigne*, “ the
“ nobility disclaimed the praise of being skilful fencers as injurious to their character, and learned
“ that art by stealth, as a matter of trick, inconsistent with real native valour.” * This art generated in the same society of the hatred of the lower classes to the higher, who oppress them, is an importation

* *Essays of Michael Montaigne*. Book ii. chap. 27.

from Italy, where the military art exists no longer. It is this which keeps up the spirit of duelling among us. We have not derived that spirit from the Nations of the North, as so many Writers have taken upon them to assert. Duels are hardly known in Russia and in Prussia; and altogether unknown to the Savages of the North. Italy is their native soil, as may be gathered from the most celebrated treatises on fencing, and from the terms of that art, which are Italian, as *tierce*, *quarte*. It has been naturalized among us through the weakness and corruption of many women, who are far from being displeased with having a bully for a lover. To those moral causes no doubt we must ascribe that strange contradiction in our government, which prohibits duelling, and at the same time permits the public exercise of an art, which pretends to teach nothing else but how to fight duels.* The pupils trained in the National Schools should be taught to entertain a very different idea of courage; and in the course of their studies, they should perform a course of human life, in which they should be instructed in what manner they ought one day to demean themselves toward a fellow-citizen, and toward an enemy.

* Fencing-masters tell us that their art expands the body, and teaches to walk gracefully. Dancing-masters say the same thing of theirs. As a proof that they are mistaken, both these classes of gentlemen are readily distinguished by their affected manner of walking. A citizen ought neither to have the attitude nor the movements of a gladiator. But if the art of fencing be necessary, duelling ought to be permitted by public authority, in order to relieve persons of character from the cruel alternative of equally dishonouring themselves, by violating the Laws of the State, and of Religion, or by observing them. In truth, worthless people are among us very much at their ease.

The season of youth would glide away agreeably and usefully amidst such a number of employments. The mind and the body would expand at one and the same time. The natural talents, frequently unknown in most men, would manifest themselves at sight of the different objects which might be presented to them. More than one *Achilles* would feel his blood all on fire on beholding a sword: more than one *Vaucanson*, at the aspect of a piece of machinery, would begin to meditate on the means of organizing wood or brass.

The attainment of all this various knowledge, I shall be told, will require a very considerable quantity of time: but if we take into consideration that which is squandered away in our colleges, in the tiresome repetitions of lessons, in the grammatical decompositions and explications of the Latin tongue; which do not communicate to the scholar so much as facility in speaking it, and in the dangerous competitions of a vain ambition, it is impossible not to admit that we have been proposing to make a much better use of it. The scholars every day scribble over in them as much paper as so many attorneys.*

* I am persuaded that if this plan of education, indigested as it is, were to be adopted, one of the greatest obstacles to the universal renovation of our knowledge and morals would be, not Regents, not academical Institutions, not University Privileges, not the square caps of Doctors. It would come from the Paper Merchants, one of whose principal branches of commerce would thereby be reduced to almost nothing. There might be devised happy and glorious compensations for the privileges of the Masters: but a money objection, in this venal age, seems to me absolutely unanswerable.

so much the more unprofitably that, thanks to the printing of the books, the versions, or themes, of which they copy, they have no occasion for all this irksome labour. But on what should the Regents themselves employ their own time if the pupils did not waste theirs ?

In the National Schools every thing would go on after the academic manner of the Greck Philosophers. The pupils should there pursue their studies, sometimes seated, sometimes standing ; sometimes in the fields, at other times in the amphitheatre, or in the park which surrounded it. There would be no occasion for either pen, or paper, or ink ; every one would bring with him only the classical book which might contain the subject of the lesson. I have had frequent experience that we forget what we commit to writing. That which I have conveyed to paper I discharge from my memory, and very soon from my recollective faculty. I have become sensible of this with respect to complete Works which I had fairly transcribed, and which appeared to me afterward as strange as if they had been the production of a different hand from my own. This does not take place with regard to the impressions which the conversation of another leaves upon our mind, especially if it be accompanied with striking circumstances. The tone of voice, the gesture, the respect due to the orator, the reflections of the company, concur in engraving on the memory the words of a discourse much better than writing does. I shall again quote to this purpose the authority of *Plutarch*, or rather that of *Lycurgus*.

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“ But it is carefully to be remarked, that *Lycurgus* would never permit any one of his Laws to be committed to writing ; it is accordingly expressly enjoined by one of the special statutes, which he calls *ρήτορες* (oracular, *pacta conventa*, Institutes) that none of his Institutes shall be copied ; because whatever is of peculiar force and efficacy toward rendering a city happy and virtuous, it was his opinion, ought to be impressed by habitual culture on the hearts and manners of men, in order to make the characters indelible. Good-will is more powerful than any other mode of constraint to which men can be subjected, for by means of it every one becomes a Law unto himself.” *

The heads of our young people should not then be oppressed, in the National Schools, with an unprofitable and prattling Science. Sometimes they should defend among themselves the cause of a citizen ; sometimes they should deliver their opinion respecting a public event. They should pursue the process of an art through it's whole course. Their eloquence would be a real eloquence, and their knowledge real knowledge. They should employ their minds on no abstruse Science, in no useless research, which are usually the fruit of pride. In the studies which I propose, every thing should bring us back to Society, to Concord, to Religion, and to Nature.

I have no need to suggest, that these several Schools should be decorated correspondently to their use, and that the exterior of them all should serve as walking

* *Plutarch's Life of Lycurgus.*

places and asylums to the People, especially during the tedious and gloomy days of Winter. There they should every day behold spectacles more proper to inspire them with virtuous sentiments, and with the love of their country, I do not say than those of the Boulevards, or than the dances of Vauxhall, but even than the tragedies of *Corneille*.

There should be among those young people no such thing as reward, nor punishment, nor emulation, and consequently no envy. The only punishment there inflicted should be, to banish from the assembly the person who should disturb it, and even that only for a time proportioned to the fault of the offender : and withal this should rather be an act of justice than a punishment ; for I would have no manner of shame to attach to that exile. But if you wish to form an idea of such an assembly, conceive, instead of our young collegians, pale, pensive, jealous, trembling about the fate of their unfortunate compositions, a multitude of young persons gay, content, attracted by pleasure to vast circular halls, in which are erected here and there the statues of the illustrious men of Antiquity, and of their own Country : behold them all attentive to the master's lessons, assisting each other in comprehending them, in retaining them, and in replying to his unexpected questions. One tacitly suggests an answer to his neighbour : another makes an excuse for the negligence of his absent comrade.

Represent to yourself the rapid progress of studies elucidated by intelligent masters, and drunk in by pupils who are mutually assisting each other in fixing
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the impression of them. Figure to yourself Science spreading among them, as the flame in a pile, all the pieces of which are nicely adjusted, communicates from one to another, till the whole becomes one blaze. Observe among them, instead of a vain emulation, union, benevolence, friendship, for an answer seasonably suggested, for an apology made in behalf of one absent by his comrades, and other little services rendered and repaid. The recollection of those early intimacies will farther unite them in the World, notwithstanding the prejudices of their various conditions.

At this tender age it is that gratitude and resentment become engraved, for the rest of life, as indelibly as the elements of Science and of Religion. It is not so in our colleges, where every scholar attempts to supplant his neighbour. I recollect that one exercise day I found myself very much embarrassed, from having forgotten a Latin Author out of which I had a page to translate. One of my neighbours obligingly offered to dictate to me the version which he had made from it. I accepted his services with many expressions of acknowledgment. I accordingly copied his version, only changing a few words, that the Regent might not perceive it to be the same with my companion's; but that which he had given me was only a false copy of his own, and was filled with blunders so extravagant that the Regent was astonished at it, and could not believe it at first to be my production, for I was a tolerably good scholar. I have not lost the recollection of that act of perfidy, though in truth I have forgotten others much more cruel

which I have encountered since that period ; but the first age of human life is the season of resentments, and of grateful feelings, which are never to be effaced.

I recollect periods of time still more remote. When I went to school in frocks I sometimes lost my books through heedlessness. I had a nurse named *Mary Talbot*, who bought me others with her own money, for fear of my being whipped at school. And of a truth the recollection of those petty services has remained so long, and so deeply imprinted on my heart, that I can truly affirm no person in the World, my mother excepted, possessed my affection so uniformly, and so constantly. That good and poor creature frequently took a cordial interest in my useless projects for acquiring a fortune. I reckoned on repaying her with usury in her old age, when she was in a manner destitute, the tender care which she took of my infancy ; but scarcely has it been in my power to give her some trifling and inadequate tokens of my goodwill. I relate these recollections, traces of which every one of my Readers probably possesses somewhat similar, and still more interesting, relating to himself and to his own childhood, to prove to what a degree the early season of life would be naturally the era of virtue and of gratitude, were it not frequently depraved among us through the faultiness of our institutions.

But before we could pretend to establish those National Schools, we must have men formed to preside in them. I would not have them chosen from among those who are most powerfully recommended. The more recommendations they might have the more
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would they be given to intrigue, and consequently the less would be their virtue. The enquiry made concerning them ought not to be, Is he a wit, a bright man, a Philosopher? But, Is he fond of children? Does he frequent the unfortunate rather than the great? Is he a man of sensibility? Does he possess virtue? With persons of such a character, we should be furnished with masters proper for conducting the public education. Besides, I could wish to change the appellation of Master and Doctor, as harsh and lofty. I would have their titles to import the friends of childhood, the fathers of the Country; and these I would have expressed by beautiful Greek names, in order to unite to the respect due to their functions the mysteriousness of their titles. Their condition, as being destined to form citizens for the Nation, should be at least as noble, and as distinguished, as that of the Squires who manage horses in the Courts of Princes. A titled magistrate should preside every day in each school. It would be very becoming, that the magistrates should cause to be trained up, under their own eyes, to justice, and to the Laws, the children whom they are one day to judge and to govern as men. Children likewise are citizens in miniature. A nobleman of the highest rank, and of the most eminent accomplishments, should have the general superintendence of these National Schools, more important beyond all contradiction than that of the studs of the kingdom; and to the end that men of letters, given to low flattery, might not be tempted to insert in the public papers the days on which he was to *vouchsafe* to make his
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visits to them, this sublime duty should have no revenue annexed to it, and the only honour that could possibly be claimed should be that of presiding.

Would to God it were in my power to conciliate the education of women to that of men, as at Sparta ! But our manners forbid it. I do not believe however that there could be any great inconveniency in associating, in early life, the children of both sexes. Their society communicates mutual grace ; besides, the first elements of civil life, of religion, and of virtue, are the same for the one and for the other. This first epoch excepted, young women should learn nothing of what men ought to know ; not that they are to remain always in ignorance of it, but that they may receive instruction with increased pleasure, and one day find teachers in their lovers. There is this moral difference between man and woman, that the man owes himself to his country, and the woman is devoted to the felicity of one man alone. A young woman will never attain this end but by acquiring a relish for the employments suitable to her sex. To no purpose would you give her a complete course of the Sciences, and make her a Theologian or a Philosopher : a husband does not love to find either a rival or an instructor in his wife. Books and masters, with us, blight betimes in a young female, virgin ignorance, that flower of the soul, which a lover takes such delight in gathering. They rob a husband of the most delicious charm of their union, of those inter-communications of amorous science, and native ignorance, so proper for filling up the long days of married life. They destroy those contrasts of character

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ter which Nature has established between the two sexes, in order to produce the most lovely of harmonies.

These natural contrasts are so necessary to love, that there is not a single female celebrated for the attachment with which she inspired her lovers, or her husband, who has been indebted for her empire to any other attractions than the amusements or the occupations peculiar to her sex, from the age of *Penelope* down to the present. We have them of all ranks, and of all characters, but not one of them learned. Such of them as have merited this description, have likewise been almost all of them unfortunate in love, from *Sappho* down to *Christina* Queen of Sweden, and even still nearer to us. It should be then by the side of her mother, of her father, of her brothers and sisters, that a young woman ought to derive instruction respecting her future duties of mother and wife. In her father's house it is that she ought to learn a multitude of domestic arts, at this day unknown to our highly bred dames.

I have oftener than once, in the course of this Work, spoken in high terms of the felicity enjoyed in Holland; however, as I only passed through that country, I have but a slight acquaintance with their domestic manners. This much nevertheless I know, that the women there are constantly employed in household affairs, and that the most undisturbed concord reigns in families. But I enjoyed at Berlin an image of the charms which those manners held in such contempt among us, are capable of diffusing over domestic life. A friend whom Providence raised

up for me in that city, where I was an entire stranger, introduced me to a society of young ladies; for in Prussia these assemblies are held not in the apartments of the married women, but of their daughters. This custom is kept up in all the families which have not been corrupted by the manners of our French officers, who were prisoners there in the last war. It is customary then for the young ladies of the same society to invite each other by turns, to assemblies which they call coffee parties. They are generally kept on Thursdays. They go, accompanied by their mothers, to the apartments of her who has given the invitation. She treats them with creamed coffee, and every kind of pastry and comfits prepared by her own hand. She presents them, in the very depth of Winter, with fruits of all sorts preserved in sugar, in colours, in verdure, and in perfume, apparently as fresh as if they were hanging on the tree. She receives from her companions thousands of compliments, which she repays with interest.

But by and by she displays other talents. Sometimes she unrolls a large piece of tapestry, on which she had been labouring night and day, and exhibits forests of willows always green which she herself has planted, and rivulets of mohair which she has set a-flowing with her needle. At other times, she weds her voice to the sounds of a harpsichord, and seems to have collected into her chamber all the songsters of the grove. She requests her companions to sing in their turn. Then it is you hear elogium upon elogium. The mothers enraptured with delight applaud themselves in secret, like *Niobe*, on the praises given to
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their daughters : *Pertentant gaudia pectus* : (the bosom glows with joy.) Some officers booted, and in their uniform, having slipped away by stealth from the exercises of the parade, step in to enjoy amidst this lovely circle some moments of delightful tranquillity ; and while each of the young females hopes to find in one of them her protector and her friend, each of the men sighs after the partner who is one day to soothe, by the charm of domestic talents, the rigour of military labours. I never saw any country in which the youth of both sexes discovered greater purity of manners, and in which marriages were more happy.

There is no occasion however to have recourse to strangers, for proofs of the power of love over sanctity of manners. I ascribe the innocence of those of our own peasantry, and their fidelity in wedlock, to their being able very early in life to give themselves up to this honourable sentiment. It is love which renders them content with their painful lot : it even suspends the miseries of slavery. I have frequently seen in the Isle of France black people, after being exhausted by the fatigues of the day, set off as the night approached to visit their mistresses, at the distance of three or four leagues. They keep their assignations in the midst of the woods, at the foot of a rock, where they kindle a fire ; they dance together a great part of the night to the sound of their *tamtam*, and return to their labour before day-break contented, full of vigour, and as fresh as those who have slept soundly all night long : such is the power possessed by the moral affections which combine with this

this sentiment, over the physical organization. The night of the lover diffuses a charm over the day of the slave.

We have in Scripture a very remarkable instance to this effect ; it is in the book of Genesis ; “ *Jacob*,” it is there written, “ served seven years for *Rachel* ; “ and they seemed unto him but a few days, for the “ love he had to her.”* I am perfectly aware that our politicians, who set no value on any thing but gold and titles, have no conception of all this ; but I am happy in being able to inform them, that no one ever better understood the Laws of Nature than the Authors of the Sacred Books, and that on the Laws of Nature only, can those of happily ordered Societies be established.

I could wish therefore that our young people might have it in their power to cultivate the sentiment of love, in the midst of their labours, as *Jacob* did. No matter at what age ; as soon as we are capable of feeling, we are capable of loving. Honourable love suspends pain, banishes languor, saves from prostitution, from the errors and the restlessness of celibacy : it fills life with a thousand delicious perspectives, by displaying in futurity the most desirable of unions : it augments, in the hearts of two youthful lovers, a relish for study, and a taste for domestic employments. What pleasure must it afford a young man, transported with the science which he has derived from his masters, to repeat the lessons of it to the fair one whom he loves ! What delight to a young and timid female to see herself distinguished amidst her compa-

* Genesis, chap. xxix. ver. 20.

nions, and to hear the value and the graces, of her little skill and industry, exalted by the tongue of her lover !

A young man, destined one day to represent on the tribunal the injustice of men, is enchanted, amidst the labyrinths of Law, to behold his mistress embroidering for him the flowers which are to decorate the asylum of their union, and to present him with an image of the beauties of Nature, of which the gloomy honours of his station are going to deprive him for life. Another, devoted to conduct the flame of war to the ends of the Earth, attaches himself to the gentle spirit of his female friend, and flatters himself with the thought that the mischief which he may do to mankind, shall be repaired by the blessings which she bestows on the miserable. Friendships multiply in families ; of the friend to the brother who introduces him, and of the brother to the sister. The kindred are mutually attracted. The young folks form their manners ; and the happy perspectives which their union discloses, cherish in them the love of their several duties, and of virtue. Who knows but those unconstrained choices, those pure and tender ties, may fix that roving spirit which some have supposed natural to women ? They would respect the bands which they themselves had formed. If, having become wives, they aim at pleasing every body, it is perhaps because when they were single, they were not permitted to be in love with one.

If there is room to hope for a happy revolution in our Country, it is to be effected only by calling back the women to domestic manners. Whatever fatigue
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may have been levelled against them, they are less culpable than the men. They are chargeable with hardly any vices except those which they receive from us : and we have a great many from which they are free. As to those which are peculiar to themselves it may be affirmed, that they have retarded our ruin, by balancing the vices of our political constitution. It is impossible to imagine what must have become of a state of Society abandoned to all the absurdities of our education, to all the prejudices of our various conditions, and to the ambitions of each contending party, had not the women crossed us upon the road. Our History presents only the disputes of monks with monks, of doctors with doctors, of grandees with grandees, of nobles with the base-born ; while crafty politicians gradually lay hold of all our possessions. But for the women all these parties would have made a desert of the State, and have led the commonalty to the very last man to the slaughter, or to market, a piece of advice which was actually given not many years ago. Ages have elapsed in which we should all have been Cordeliers, born and dying encircled with the cord of St. *Francis* ; in others, all would have taken to the road in the character of knights-errant, rambling over hill and dale with lance in hand ; in others, all penitents, parading through the streets of our cities in solemn processions, and whipping ourselves to some purpose ; in others, *quisquis* or *quamquam* of the University.

The women, thrown out of their natural state by our unjust manners, turn every thing upside down, laugh at every thing, destroy every thing, the great fortunes,

fortunes, the pretensions of pride, and the prejudices of opinion. Women have only one passion, which is love, and this passion has only one object; whereas men refer every thing to ambition, which has thousands. Whatever be the irregularities of women, they are always nearer to Nature than we are, because their ruling passion is incessantly impelling them in that direction, whereas ours on the contrary is betraying us into endless deviations. A Provincial, and even a Parisian tradesman, hardly behaves with kindness to his children when they are somewhat grown up; but he bends with profound reverence before those of strangers, provided they are rich or of high quality: his wife on the contrary is regulated in her behaviour to them by their figure. If they are homely she neglects them; but she will caress a peasant's child if it is beautiful; she will pay more respect to a low-born man with gray hairs and a venerable head, than to a counsellor without a beard. Women attend only to the advantages which are the gift of Nature, and men only to those of fortune. Thus the women amidst all their irregularities still bring us back to Nature, while we, with our affectation of superior wisdom, are in a constant tendency to deviation from her.

I admit at the same time that they have prevented the general calamity only by introducing among us an infinite number of particular evils. Alas! as well as ourselves they never will find happiness except in the practice of virtue. In all countries where the empire of virtue is at an end, they are most miserable. They were formerly exceedingly happy, in the virtu-

ous Republics of Greece and of Italy : there they decided the fate of States : at this day, reduced to the condition of slaves in those very countries, the greatest part of them are under the necessity of submitting to prostitution for the sake of a livelihood. Ours ought not to despair of us. They possess over man an empire absolutely inalienable ;* we know them only under the appellation of the sex, to which we have given the epithet of fair by way of excellence. But how many other descriptive epithets, still more interesting, might be added to this, such as those of nutritive, consolatory ! They receive us on our entrance into life, and they close our eyes when we die. It is not to beauty, but to Religion, that our women are indebted for the greatest part of their influence ; the same Frenchman who in Paris sighs at the feet of his mistress, holds her in fetters, and under the discipline of the whip, in St. Domingo. Our Religion alone

* It deserves to be remarked, that most of the names of the objects of Nature, of morals, and of metaphysics, are feminine, especially in the French language. It would afford matter of curious research, to enquire, whether masculine names have been given by the women, and feminine names by the men, to objects which are most particularly subservient to the uses of each sex ; or whether the first have been made of the masculine gender, because they presented characters of energy and force, and the second of the feminine gender, because they displayed characters of grace and loveliness. I am persuaded, that the men having given names to the objects of nature, in general, have lavished feminine designations upon them, from that secret propensity which attracts them toward the sex : this observation is supported by the names assigned to the heavenly Constellations, to the four quarters of the Globe, to by far the greatest part of rivers, kingdoms, fruits, trees, virtues, and so on.

of all contemplates the conjugal union in the order of Nature : it is the only Religion on the face of the Earth which presents woman to man as a companion ; every other abandons her to him as a slave. To Religion alone do our women owe the liberty which they enjoy in Europe ; and from the liberty of the women it is that the liberty of Nations has flowed, accompanied with the proscription of a multitude of inhuman usages, which have been diffused over all the other parts of the World, such as slavery, se-fraglios, and eunuchs. O charming sex ! it is in your virtue that your power consists.—Save your Country, by recalling to the love of domestic manners your lovers and your husbands, from a display of your gentle occupations : You would restore Society at large to a sense of duty, if each of you brings back one single man to the order of Nature. Envy not the other sex their authority, their magistracies, their talents, their vain-glory ; but in the midst your weakness, surrounded with your wools and your silks, give thanks to the AUTHOR of Nature, for having conferred on you alone the power of being always good and beneficent.

RECAPITULATION.

I HAVE presented, from the beginning of this Work, the different paths of Nature which I proposed to pursue, on purpose to form to myself an idea of the order which governs the World. I brought forward, in the first place, the objections which have in all ages been raised against a Providence; I have exhibited them as applied to the several kingdoms of Nature, one after another; which furnished me with an opportunity, in refuting them, of displaying views entirely new respecting the disposition, and the use, of the different parts of this Globe: I have accordingly referred the direction of the chains of Mountains on the Continents, to the regular Winds which blow over the Ocean; the position of Islands, to the confluence of it's Currents, or of those of Rivers; the constant supply of fuel to Voleanos, to the bituminous deposits on it's shores; the Currents of the Sea, and the movements of the Tides, to the alternate effusions of the Polar Ices.

In the next place, I have refuted, in order, the other objections raised on the subject of the vegetable and animal kingdoms, by demonstrating, that these kingdoms were no more governed by mechanical Laws than the fossil kingdom is. I have farther demonstrated, that the greatest part of the ills which oppress the human race are to be ascribed to the defects of our political Institutions, and not to those of Nature; that Man is the only being who is abandoned

doned to his own providence, as a punishment for some original transgression ; but that the same DEITY who had given him up to the direction of his own intelligence, still watched over his destination ; that he caused to recoil on the Governors of the Nations the miseries with which they overwhelm the little and the weak ; and I have demonstrated the action of a Divine Providence from the very calamities of the Human Race. Such is the subject of my first Part.

In the opening of my second, I have attacked the principles of our Sciences, by evincing that they mislead us, either by the boldness of those same principles, from whence they would soar up to the nature of the elements which elude their grasp, or by the insufficiency of their methods, which is capable of catching only one Law of Nature at once, because of the weakness of our understanding and of the vanity inspired by our education, whereby we are betrayed into the belief that the little paths in which we tread are the only roads leading to knowledge. Thus it is that the natural Sciences, and even the political which are results from them, having been with us separated from each other, each one in particular has formed, if I may use the expression, a lane without a thoroughfare, of the road by which it entered. Thus it is that the physical causes have, at the long run, made us lose sight of intellectual ends in the order of Nature, as financial causes have stripped us of the hopes of Religion and of Virtue, in the social order.

I afterwards set out in quest of a faculty better adapted to the discovery of truth than our reason,

which after all is nothing but our personal interest merely. I flatter myself I have found it in that sublime instinct called *sentiment*, which is in us the expression of natural Laws, and which is invariable among all Nations. By means of it I have observed the Laws of Nature, not by tracing them up to their principles, which are known to GOD only, but by descending into their results, which are destined to the use of Man. I have had the felicity, in pursuance of this track, to perceive certain principles of the correspondencies and of the harmonies which govern the World.

I cannot entertain a shadow of doubt, that it was by proceeding in this same track, the ancient Egyptians distinguished themselves so highly for their attainments in natural knowledge, which they carried incomparably farther than we have done. They studied Nature in Nature herself, and not by piecemeal, and with machines. Hence they formed a most wonderful Science, of just celebrity all over the Globe, under the name of Magic. The elements of this Science are now unknown: the name of it alone is all that remains, and is at this day given to operations the most stupid in which the error and depravity of the human heart can be employed. This was not the character of the Magic of the ancient Egyptians, so much celebrated by the most respectable Authors of Antiquity, and by the Sacred Books themselves. These were the principles of correspondence and of harmony which *Pythagoras* derived from their stores, which he imported into Europe, and which there became the sources of the various branches of Philosophy

phy that appeared after his time, nay the source of the Arts likewise, which did not begin to flourish there till that period ; for the Arts are only imitations of the processes of Nature.

Though my incapacity is very great, these harmonic principles are so luminous that they have presented to me not only dispositions of the Globe entirely new ; but they have besides furnished me with the means of distinguishing the characters of plants on the first inspection, so as to be able to say at once This is a native of the mountains, That is an inhabitant of the shores. By them I have demonstrated the use of the leaves of plants, and have determined by the nautical or volatile forms of their grains, the relations which they have to the places where they are destined to grow. I have observed that the *corolle* of their flowers had relations, positive or negative, to the rays of the Sun, according to the difference of Latitude, and to the points of elevation at which they are to blow. I have afterwards remarked the charming contrasts of their leaves, of their flowers, of their fruits, and of their stems, with the soil and the sky in which they grow, and those which they form from genus to genus, being, if I may say so, grouped by pairs. Finally, I have indicated the relations in which they stand to animals, and to Man ; to such a degree, that I am confident to affirm, I have demonstrated there is not a single shade of colour impressed by chance, through the whole extent of Nature.

By prosecuting these views, I have supplied the means of forming complete chapters of Natural History, from having evinced that each plant was the

centre of the existence of an infinite number of animals, which possess correspondencies with it to us still unknown. Their harmonies might undoubtedly be extended much farther; for many plants seem to have relations not only to the Sun, but to different constellations. It is not always such an elevation of the Sun above the Horizon which elicits the vegetative powers of plants. Such a one flourishes in the Spring, which would not put out the smallest leaf in Autumn, though it might then undergo the same degree of heat. The same thing is observable with respect to their seeds, which germinate and shoot at one season, and not at another, though the temperature may be the same.

These celestial relations were known to the ancient Philosophy of the Egyptians, and of *Pythagoras*. We find many observations on this subject in *Pliny*; when he says for example that toward the rising of the Pleiades, the olive-trees and vines conceive their fruit; and after *Virgil*, that wheat ought to be sown immediately on the retiring of this constellation; and lentils on that of Boötes; that reeds and willows should be planted when the constellation of the Lyre is setting. It was after these relations, the causes of which are unknown to us, that *Linnaeus* formed with the flowers of plants a botanical almanac, of which *Pliny* suggested the first idea to the husbandmen of his time.* But we have indicated vegetable harmonies still more interesting, by demonstrating that the time of the expansion of every plant, of its flowering, and of the maturity of its fruit, was connected

* Consult his Natural History, Book xviii. chap. 23,

with the expansions and the necessities of the animal creation, and especially with those of Man. There is not a single one but what possesses relations of utility to us, direct or indirect : but this immense and mysterious part of the History of Man will perhaps never be known, except to the Angels.

My third Part presents the application of these harmonic principles to the nature of Man himself. In it I have shewn, That he is formed of two powers, the one physical and the other intellectual, which affect him perpetually with two contrary sentiments, the one of which is that of his misery, and the other that of his excellence. I have demonstrated, that these two powers were most happily gratified in the different periods of the passions, of the ages and of the occupations to which Nature has destined Man, such as agriculture, marriage, the settlement of posterity, Religion.

I have dwelt principally on the affections of the intellectual power, by rendering it apparent that every thing which has the semblance of delicious and transporting in our pleasures, arose from the sentiment of infinity, or of some other attribute of DEITY, which discovered itself to us as the termination of our perspective. I have demonstrated, on the contrary, that the source of our miseries and of our errors, might be traced up to this, That in the social state we frequently cross those natural sentiments by the prejudices of education and of society : so, that, in many cases, we make the sentiment of infinity to bear upon the transient objects of this World, and that of our frailty and misery upon the immortal plans of Nature.

I have

I have only glanced at this rich and sublime subject ; but I assert with confidence, that by pursuing this track simply, I have sufficiently proved the necessity of virtue, and that I have indicated it's real source, not where our modern Philosophers seek for it, namely in our political institutions, which are often diametrically opposite to it, but in the natural state of Man, and in his own heart.

I have afterwards applied, with what ability I possess, the action of these two powers to the happiness of Society, by shewing, first, that most of the ills we endure are only social re-actions, all of which have their grand origin in overgrown property, in employments, in honours, in money, and in land. I have proved that those enormous properties produce the physical and moral indigence of a Nation ; that this indigence generated, in it's turn, swarms of debauched men, who employed all the resources of craft and industry to make the rich refund the portion which their necessities demand ; that celibacy, and the disquietudes with which it is attended, were in a great many citizens the effects of that state of penury and anguish to which they found themselves reduced ; and that their celibacy produced, by repercussion, the prostitution of women of the town ; because every man who abstains from marriage, whether voluntarily or from necessity, devotes a young woman to a single life, or to prostitution. This effect necessarily results from one of the harmonic laws of Nature, as every man comes into the World, and goes out of it, with his female, or what amounts to the same thing, the males and females of the human species are born and die

die in equal numbers. From these principles I have deduced a variety of important consequences.

I have finally demonstrated, That no inconsiderable part of our physical and moral maladies proceeded from the chastisements, the rewards, and the vanity of our education.

I have hazarded sundry conjectures, in the view of furnishing to the People abundant means of subsistence and of population, and of re-animating in them the spirit of Religion and of Patriotism, by presenting them with certain perspectives of infinity, without which the felicity of a Nation, like that of an individual, is negative, and quickly exhausted, were we to form plans in other respects the most advantageous, of finance, of commerce, and of agriculture. Provision must be made, at once, for Man, as an animal, and as an intelligent being. I have terminated those different projects, by presenting the sketch of a National Education, without which it is impossible to have any species of Legislation or of Patriotism that shall be of long duration. I have endeavoured to unfold in it at once the two powers, physical and intellectual, of Man, and to direct them toward the love of Country and of Religion.

I must no doubt have frequently gone astray in pursuing paths so new, and so intricate. I must have many a time sunk far below my subject, from the construction of my plans, from my inexperience, from the very embarrassment of my style ; but, I repeat it, provided my ideas shall suggest superior conceptions to others, I am well satisfied. At the same time, if calamity be the road to Truth, I have not been destitute

tute of means to direct me toward her. The disorders of which I have frequently been the witness, and sometimes the victim, have suggested to me ideas of order. I have sometimes found upon my road great personages of high repute, and men belonging to respectable bodies, who had the words Country and Humanity continually in their mouth. I associated with them, in the view of deriving illumination from their intelligence, and of putting myself under the protection of their virtues ; but I discovered them to be intriguers merely, who had no other object in view but their personal fortune, and who began to persecute me the moment that they perceived I was not a proper person to be either the agent of their pleasures, or the trumpeter of their ambition. I then went over to the side of their enemies, promising myself to find among them the love of truth, and of the public good ; but however diversified our sects, our parties, and our corps may be, I every where met the same men, only clothed in different garbs. As soon as the one or the other found that I refused to enlist as a partizan, he calumniated me, after the perfidious manner of the age, that is by pronouncing my panegyric. The times we live in are highly extolled ; but if we have on the throne a Prince who emulates *Marcus Aurelius*, the age rivals that of *Tiberius*.

Were I to publish the memoirs of my own life,*

I could

* It would be I acknowledge after all a matter of very small importance ; but however retired at this day my condition of life may be ; it has been interwoven with revolutions of high moment. I presented, on the subject of Poland, a very circumstantial memoir to the Office for Foreign Affairs, in which I predicted it's
partition

I could wish for no stronger proof of the contempt which the glory of this World merits, than to hold up to view the persons who are the objects of it. At

partition by the neighbouring Powers several years before it was actually accomplished. The only mistake I committed was in going on the supposition that the partitioning Powers would lay hold of it entirely; and I am astonished to this hour that they did not. This memoir however has been of no utility either to that country or to myself, though I had exposed myself to very great risks in it, by throwing myself, when I quitted the Russian service, into the party of the Polish Republicans, then under the protection of France and of Austria. I was there taken prisoner in 1765, as I was going, with the approbation of the Ambassador of the Empire, and of the French Minister at Warsaw, to join the army commanded by Prince *Radziwil*. This misfortune befel me about three miles from Warsaw, through the indiscretion of my guide. I was carried back to that city, put in prison, and threatened with being delivered up to the Russians, whose service I had just quitted, unless I acknowledged that the Ambassador of the Court of Vienna, and the Minister of France, had concurred in recommending this step to me. Though I had every thing to fear on the part of Russia, and had it in my power to involve in my disgrace two personages in illustrious situations, and consequently to render it more conspicuous, I persisted in taking the whole upon myself. I likewise did my utmost to exculpate the guide, to whom I had given time to burn the dispatches with which he was entrusted, by keeping back, with my pistol in my hand, the Houlands who had just surprized us by night, in the post-house, where we made our first encampment in the midst of the woods.

I never had the least shadow of recompense for either of these two pieces of service, which cost me a great deal of both time and money. Nay it is not very long since I was actually in debt for part of the expence of my journey, to my friend M. *Hennin* then Minister of France at Warsaw, now First Commissary for Foreign Affairs at Versailles, and who has given himself much fruitless trouble on the subject. Undoubtedly, had M. the Count *de Vergennes* been at that time Minister for Foreign Affairs, I should have been suitably rewarded, as he has procured for me some slight gratuities.

the time when, unconscious of having committed the lightest injury to any one, after an infinity of fruitless voyages, services and labours, I was preparing in

gratuities. I stand however to this hour indebted to the amount of more than four thousand livres (£.166 13s. 4d.) on that account, to different friends in Russia, Poland and Germany.

I have not been more fortunate in the Isle of France, to which I was sent Captain-Engineer of the Colony; for, in the first place, I was persecuted by the ordinary Engineers who were stationed there, because I did not belong to their corps. I had been dispatched to that Country, as to a situation favourable to making a fortune, and I must have run considerably in debt had I not submitted to live on herbs. I pass over in silence all the particular distresses I had there to undergo. I shall only say, that I endeavoured to dissipate the mortification which they cost me, by employing my mind on the subject of the ills which oppressed the island in general. It was entirely in the view of remedying these, that I published, on my return from thence, in 1773, my *Voyage to the Isle of France*. I considered myself, first, as rendering an essential service to my Country, by making it apparent that this island, which is kept filled with troops, was in no respect proper for being the staple, or the citadel of our commerce with India, from which it is more than fifteen hundred leagues distant. This I have even proved by the events of preceding wars, in which Pondicherry has always been taken from us, though the Isle of France was crowded with soldiers. The late war has confirmed anew the truth of my observations. For these services, as well as for many others, I have received no other recompense save indirect persecutions and calumnies, on the part of the inhabitants of that island, whom I reprehended for their barbarity to their slaves. I have not even received an adequate indemnification for a species of shipwreck which I underwent on my return, at the Island of Bourbon, nor for the smallness of my appointments, which were not up to the half of those of the ordinary Engineers of my rank. I am well assured that, under a Marine Minister as intelligent and as equitable as M. the *Marschal de Castries*, I should have reaped some part of the fruit of my literary and military services.

solitude

solitude these last fruits of my experience and application, my secret enemies, that is the men under whom I scorned to enlist as a partisan, found means to intercept a gratuity which I annually received from the beneficence of my Sovereign. It was the only source of subsistence to myself, and the only means I enjoyed of assisting my family. To this catastrophe were added the loss of health, and domestic calamities which baffle all the powers of description. I have hastened therefore to gather the fruit, though still immature, of the tree which I had cultivated with such unwearied perseverance, before it was torn up by the tempest.

But I bear no malice to any one of my persecutors. If I am one day laid under the necessity of exposing to the light their secret practices against me, it shall only be in the view of justifying my own conduct. In other respects I am under obligation to them. Their persecution has proved the cause of my repose. To their disdainful ambition I am indebted for a liberty which I prize far above their greatness. To them I owe the delicious studies to which I have devoted my attention. Providence has not abandoned me, though they have. It has raised up friends, who have served me as opportunity offered with my Prince; and others will arise to recommend me to his favour, when it may be necessary. Had I reposed in God that confidence which I put in men, I should have always enjoyed undisturbed tranquillity: the proofs of his Providence as affecting myself, in the past, ought to set my heart at rest about futurity. But from a fault of education, the opinions of men still exercise

exercise too much dominion over me. By their fears and not my own is my mind disturbed. Nevertheless I sometimes say to myself, Wherefore be embarrassed about what is to come? Before you came into the World were you disquieted with anxious thoughts about the manner in which your members were to be combined, and your nerves and your bones to expand? When in process of time you emerged into light, did you study optics in order to know how you were to perceive objects; and anatomy, in order to learn how to move about your body, and how to promote it's growth? These operations of Nature, far superior to those of men, have taken place in you without your knowledge, and without any interference of your own. If you disquieted not yourself about being born, Wherefore should you about living, and Wherefore about dying? Are you not always in the same hand?

Other sentiments however, natural to the mind of Man, have filled me with dejection. For example, Not to have acquired after so many peregrinations and exertions, one little rural spot, in which I could in the bosom of repose have arranged my observations on Nature, to me of all others the most amiable and interesting under the Sun. I have another source of regret still more depressing, namely the misfortune of not having attached to my lot a female mate, simple, gentle, sensible and pious, who much better than Philosophy would have soothed my solitudes, and who, by bringing me children like herself, would have provided me with a posterity incomparably more dear than a vain reputation. I had found this retreat
and

and this rare felicity, in Russia, in the midst of honourable employment; but I renounced all these advantages, to go in quest, at the instigation of Ministers, of employment in my native Country, where I had nothing similar after which to aspire. Nevertheless I am enabled to say, that my particular studies have repaired the first privation, in procuring for me the enjoyment not only of a small spot of ground, but of all the harmonies diffused over the vast garden of Nature. An estimable partner for life cannot be so easily replaced; but if I have reason to flatter myself that this Work is contributing to multiply marriages, to render them more happy, and to soften the education of children, I shall consider my own family as perpetuated in them, and I shall look on the wives and children of my Country as in some sense mine.

Nothing is durable, Virtue alone excepted. Personal beauty passes quickly away; fortune inspires extravagant inclinations; grandeur fatigues; reputation is uncertain; talents, nay genius itself, are liable to be impaired: but Virtue is ever beautiful, ever diversified, ever equal, and ever vigorous, because it is resigned to all events, to privations as to enjoyments, to death as to life.

Happy then, happy beyond conception, if I have been enabled to contribute one feeble effort toward redressing some of the evils which oppress my Country, and to open to it some new prospect of felicity! Happy, if I have been enabled to wipe away, on the one hand, the tears of some unfortunate wretch, and to recal, on the other, men misled by the intoxication

of pleasure, to the DIVINITY, toward whom Nature, the times, our personal miseries, and our secret affections, are attracting us with so much impetuosity !

I have a presentiment of some favourable approaching revolution. If it does take place, to the influence of literature we shall be indebted for it. In modern times learning produces little solid benefit to the persons who cultivate it; nevertheless it directs every thing. I do not speak of the influence which letters possess all the Globe over, under the government of books. Asia is governed by the maxims of *Confucius*, the Korans, the Beths, the Vidams, and the rest; but in Europe, *Orpheus* was the first who associated it's inhabitants, and allured them out of barbarism by his divine poetry. The genius of *Homer* afterwards produced the legislations and the religions of Greece. He animated *Alexander*, and sent him forth on the conquest of Asia. He extended his influence to the Romans, who traced upward, in his sublime poetical effusions, the genealogy of the founder, and of the sovereigns of their Empire, as the Greeks had found in him the rudiments of their Republics and of their Laws. His august shade still presides over the poetry, the liberal Arts, the Academies, and the Monuments of Europe: such is the power over the human mind, exercised by the perspectives of DEITY which he has presented to it! Thus the Word which created the World still governs it; but when it had descended itself from Heaven, and had shewn to Man the road to happiness in Virtue alone, a light more pure than that which had shed a lustre over the islands of Greece, illuminated

nated the forests of Gaul. The Savages who inhabited them would have been the happiest of Mankind, had they enjoyed liberty; but they were subjected to tyrants, and those tyrants plunged them back into a sacred barbarism, by presenting to them phantoms so much the more tremendous, that the objects of their confidence were transformed into those of their terror.

The cause of human felicity, and of Religion herself, was on the brink of desperation, when two men of letters, *Rabelais* and *Michael Cervantes*, arose, the one in France and the other in Spain, and shook at once the foundations of monastic power* and that of chivalry. In levelling these two Colossuses to the ground, they employed no other weapons but ridicule, that natural contrast of human terror. Like to children, the Nations of Europe laughed and resumed their courage: they no longer felt any other impulsions toward happiness but those which their Princes chose to give them, if their Princes had then been capable of communicating such impul-

* God forbid that I should be thought to insinuate an invective against persons, or orders, truly religious. Supposing them to possess no higher merit in this life, than that of passing it without doing mischief, they would be respectable in the eyes of infidelity itself. The persons here exposed are not men really pious, who have renounced the World, in order to cherish without interruption the spirit of Religion: but those who have assumed a habit consecrated by Religion, to procure for themselves the riches and the honours of this World; those against whom St. *Jerome* thundered so vehemently to no purpose, and who have verified his prediction in Palestine and in Egypt, in bringing Religion into discredit by the profligacy of their manners, by their avarice and their ambition.

sion. The *Telemachus* made it's appearance, and that Book brought Europe back to the harmonies of Nature. It produced a wonderful revolution in Politics. It recalled Nations and their Sovereigns to the useful arts, to commerce, to agriculture, and above all, to the sentiment of DEITY. That Work united to the imagination of *Homer* the wisdom of *Confucius*. It was translated into all the languages of Europe. It was not in France that it excited the highest admiration: there are whole Provinces in England where it is still one of the books in which children are taught to read. When the English entered the Cambrasis with the allied army, they wished to carry the Author, who was living there in a state of retirement from the Court, into their camp, to do him the honours of a military festival; but his modesty declined that triumph: he concealed himself. I shall add but one trait to his elogium: he was the only man living of whom *Louis XIV.* was jealous: and he had reason to be so; for while he was exerting himself to excite the terror, and purchase the admiration of Europe, by his armies, his conquests, his banquets, his buildings, and his magnificence, *Fenelon* was commanding the adoration of the whole World by a Book.*

Many

* It is absurd to institute a comparison between *Bossuet* and *Fenelon*: I am not capable of appraising their several merits, but I cannot help considering the second as highly preferable to his rival. He fulfilled, in my apprehension, the two great precepts of the Law: HE LOVED GOD AND MEN.

The Reader will perhaps not be displeased at being told what *J. J. Rousseau* thought of this great man. Having one day set out
with

Many learned men, inspired by his genius, have changed among us the spirit of the Government, and the public manners. To their Writings we are indebted for the abolition of many barbarous customs, such as that of punishing capitally the pretended crime of witchcraft; the application of the rack to all criminals without distinction; the remains of feudal slavery; the practice of wearing swords in the bosom of cities, in times of profound peace, and many others. To them we owe the return of the tastes,
and

with him on a walking excursion to Mount Valerien, when we had reached the summit of the mountain, it was resolved to ask a dinner of it's hermits, for payment. We arrived at their habitation a little before they sat down to table, and while they were still at Church. *J. J. Rousseau* proposed to me to step in and offer up our devotions. The hermits were at that time reciting the Litanies of Providence, which are remarkably beautiful. After we had addressed our prayer to God, in a little chapel, and as the hermits were proceeding toward their refectory, *Rousseau* said to me, with his heart overflowing: "At this moment I experience
" what is said in the Gospel: *Where two or three are gathered to-*
" *gether in my name, there am I in the midst of them.* There is here a
" sentiment of peace and of felicity which penetrates the soul." I
replied: "If *Fenelon* had lived, you would have been a Catholic." He exclaimed in an extasy, and with tears in his eyes: "O! if
" *Fenelon* were in life, I would struggle to get into his service as
" lackey, in hope of meriting the place of his valet de chambre."

Having picked up some time ago on the Pont-Neuf, one of those little urns which the Italians sell about the streets for a few half-pence a-piece, the idea struck me of converting it, as a decoration of my solitude, into a monument sacred to the memory of *John-James* and of *Fenelon*, after the manner of those which the Chinese set up to the memory of *Confucius*. As there are two little scutcheons on this urn, I wrote on the one these words, *J. J. Rousseau*; and on the other *F. FENELON*. I then placed it in

and of the duties of Nature, or at least their images.
'They have restored to many infants the breasts of their

an angle of my cabinet, about six feet from the floor, and close by it, the following inscription.

D. M.

A la gloire durable & pure
De ceux dont le génie éclaira les vertus,
Combattit à la fois l'erreur & les abus,
Et tenta d'amener le siècle à la Nature.
AUX JEAN-JACQUES ROUSSEAUX, aux FRANÇOIS FENELONS,
J'ai dédié ce monument d'argile,
Que j'ai consacré par leur noms,
Plus augustes que ceux de CESAR & d'ACHILLE.
Ils ne sont point fameux par nos malheurs :
Ils n'ont point, pauvres laboureurs,
Ravi vos bœufs, ni vos javelles ;
Bergères, vos anans ; nourissons, vos mamelles ;
Rois, les états où vous réglez :
Mais vous les comblerez de gloire,
Si vous donnez a leur mémoire
Les pleurs qu'ils vous ont épargnés.

To the pure and unfading glory,
Of the men whose virtues were illumined by genius ;
Who set their faces against error and depravity,
And laboured to bring Mankind back to Nature :
To the ROUSSEAUS and the FENELONS of the Human Race,
I dedicate this humble monument of clay,
And inscribe it with their names,
Far more august than those of CESAR and ACHILLES.
They purchased not fame by spreading devastation
They did not, O ye poor husbandmen,
Seize your oxen, and plunder your barns ;
Nor, shepherdesses, carry off your lovers ; nor, sucklings, your teats ;
Nor, Kings, did they ravage your domains :
But their glory will be complete,
If on their memory you bestow
The tears which they have spared you.

mothers,

mothers, and to the rich a relish for the country, which induces them now a-days to quit the centre of cities, and to take up their habitation in the suburbs. They have inspired the whole Nation with a taste for agriculture, which is degenerated as usual, into fanaticism, since it became a spirit of corps. They have the honour of bringing back the noblesse to the commonalty, toward whom it must be confessed they had already made some steps of approximation, by their alliances with finance; they have recalled that order to their peculiar duties by those of humanity. They have directed all the powers of the State, the women themselves not excepted, toward patriotic objects, by arraying them in attractive ornaments and flowers.

O ye men of letters! without you the rich man would have no manner of intellectual enjoyment; his opulence and his dignities would be a burthen to him. You alone restore to us the rights of our nature, and of DEITY. Wherever you appear, in the military, in the clergy, in the laws, and in the arts, the divine Intelligence unveils itself, and the human heart breathes a sigh. You are at once the eyes and the light of the Nations. We should be perhaps at this hour much nearer to happiness, if several of your number, intent on pleasing the multitude, had not misled them by flattering their passions, and by mistaking their deceitful voices for those of human nature.

See how these passions have misled yourselves, from your having come too closely into contact with men! It is in solitude, and living together in unity, that your talents communicate mutual intellectual light. Call to remembrance the times when the *La Fon-*

taines, the *Boileaus*, the *Racines*, the *Molieres*, lived with one another. What is at this day your destiny? That World whose passions you are flattering arms you against each other. It turns you out to a strife of glory, as the Romans exposed the wretched to wild beasts. Your holy lists are become the amphitheatres of gladiators. You are, without being conscious of it, the mere instruments of the ambition of corps. It is by means of your talents that their leaders procure for themselves dignities and riches, while you are suffered to remain in obscurity and indigence. Think of the glory of men of letters among the Nations who were emerging out of barbarism; they presented virtue to Mankind, and were exalted into the rank of their Gods. Think of their degradation among Nations sunk into corruption: they flattered their passions and became the victims of them. In the decline of the Roman of Empire, letters were no longer cultivated, except by a few enfranchised Greeks. Suffer the herd to run at the heels of the rich and the voluptuous. What do you propose to yourselves in the sacred career of letters, except to march on under the protection of *Minerva*? What respect would the World shew you were you not covered by her immortal Egis? It would trample you under foot. Suffer it to be deceived by those who are mean enough to be it's worshippers; repose your confidence in Heaven, whose support will search and find you out wherever you may be.

The vine one day complained to Heaven, with tears, of the severity of her destiny. She envied the condition of the reed. "I am planted," said she,
"amidst

“ amidst parched rocks, and am obliged to produce
 “ fruits replenished with juice; whereas in the bottom
 “ of that valley the reed, which bears nothing but a
 “ dry shag, grows at her ease by the brink of the
 “ waters.” A voice from Heaven replied: “ Com-
 “ plain not, O vine! at thy lot. Autumn is com-
 “ ing on, when the reed will perish without ho-
 “ nour on the border of the marshes; but the rain of
 “ the skies will go in quest of thee in the mountain,
 “ and thy juices, matured on the rock, shall one day
 “ serve to cheer the heart of God and Man.”

We have, farther, a considerable ground of hope of reformation in the affection which we bear to our Kings. With us the love of Country is one and the same thing with the love of our Prince. This is the only bond which unites us, and which oftener than once has prevented our falling to pieces. On the other hand, Nations are the real monuments of Kings. All those monuments of stone, by which so many Princes have dreamt of immortalizing their names, frequently served only to render them detestable. *Pliny* tells us that the Egyptians of his time cursed the memory of the Kings of Egypt who had built the pyramids; and besides their names had sunk into oblivion. The modern Egyptians allege that they were raised by the Devil, undoubtedly from the sentiment of the distress which rearing those edifices must have cost Mankind. Our own People frequently ascribe the same origin to our ancient bridges, and to the great roads cut through rocks whose summits are lost in the clouds. To no purpose are medals struck for their use; they understand nothing about

about emblems and inscriptions. But it is the heart of Man on which the impresson ought to be made, by means of benefits conferred ; the stamp there imprinted is never to be effaced. The People have lost the memory of their Monarchs who presided in councils, but they cherish to this day, the remembrance of those of them who supped with millers.

The affection of the People fixes on one single quality in their Prince ; it is his popularity ; for it is from this that all the virtues flow of which they stand in need. A single act of justice dispensed unexpectedly, and without ostentation, to a poor widow, to a collier, fills them with admiration and delight. They look upon their Prince as a God, whose Providence is at all times and in every place upon the watch : and they are in the right ; for a single interposition of this nature, well-timed, has a tendency to keep every oppressor in awe, and enlivens all the oppressed with hope. In our days venality and pride have reared, between the People and their Sovereign, a thousand impenetrable walls of gold, of iron, and of lead. The People can no longer advance toward their Prince, but the Prince has it still in his power to descend toward the People. Our Kings have been prepossessed on this subject with groundless fears and prejudices. It is singularly remarkable nevertheless, that among the great number of Princes of all Nations who have fallen the victims of different factions, not a single one ever perished when employed in acts of goodness, walking about on foot, and *incognito* ; but all of them, either riding in their coaches, or at table in the bosom of pleasure, or in their court surrounded by

by their guards, and in the very centre of their power.

We see at this hour the Emperor and the King of Prussia, in a carriage simply, with one or two domestics and no guards, traversing their scattered dominions, though peopled in part with strangers and conquered Nations. The great men and the most illustrious Princes of Antiquity, such as *Scipio*, *Germanicus*, *Marcus Aurelius*, travelled without retinue, on horseback, and frequently on foot. How many provinces of his kingdom, in an age of trouble and faction, were thus travelled over by our great *Henry IV* ?

A King in his States ought to be like the Sun over the Earth, on which there is not one single little plant but what receives, in it's turn, the influence of his rays. Of the knowledge of how many important truths are our Kings deprived by the prejudices of courtiers ? What pleasures do they lose from their sedentary mode of life ! I do not speak of those of grandeur, when they see on their approach, Nations flocking together in millions, along the highways ; the ramparts of cities set on fire with the thunder of artillery, and squadrons issuing out of their sea-ports, and covering the face of the Ocean with flags and flame. I believe they are weary of the pleasures of glory. But I can believe them sensible to those of humanity, of which they are perpetually deprived. They are for ever constrained to be Kings, and never permitted to be Men. What delight might it not procure them to spread a veil over their greatness, like the Gods, and to make their appearance in the midst of a virtuous family, like *Jupiter* at the fire-side
of

of *Philemon* and *Baucis* ! How little would it cost them to make happy people every day of their lives ! In many cases, what they lavish on a single family of courtiers, would supply the means of happiness to a whole Province. On many occasions their appearance merely would overawe all the tyrants of the district, and console all the miserable. They would be considered as omnipresent, when they were not known as confined to a particular spot. One confidential friend, a few hardy servants, would be sufficient to bring within their reach all the pleasures of travelling from place to place, and to screen them from all the inconveniencies of it.

They have it in their power to vary the seasons as they will, without stirring out of the kingdom, and to extend their pleasures to the utmost extent of their authority. Instead of inhabiting country-residences on the banks of the Seine, or amidst the rocks of Fontainebleau, they might have them on the shores of the Ocean, and at the bottom of the Pyrenees. It depends altogether on themselves, to pass the burning heats of Summer, embosomed in the mountains of Dauphiné, and encompassed with a horizon of snow ; the Winter in Provence, under olive-trees and verdant oaks ; the Autumn, in the ever-green meadows, and amidst the apple orchards, of fertile Normandy. They would every day behold arriving on the shores of France, the sea-faring men of all Nations, British, Spanish, Dutch, Italian, all exhibiting the peculiarities and the manners of their several countries. Our Kings have in their palaces comedies, libraries, hot-houses, cabinets of Natural History ; but all these col-
lections

lections are only vain images of Men and of Nature. They possess no gardens more worthy of them than their kingdoms, and no libraries so fraught with instruction as their own subjects.*

* Here undoubtedly the Volume ought to have closed. It is no inconsiderable mortification to me, that my duty as a Translator, permitted me not to retrench the piece of extravagance which follows. In justice to myself however I transmit it to the British Public, with an explicit disavowal of it's spirit, of it's style, of it's sentiments, and of it's object. I can excuse the rapturous vanity of a Frenchman, when his Prince, or when his Republic is the theme; I can not only excuse, but likewise commend, the effusions of a grateful heart, filled with the idea of a kingly benefactor; I can excuse the self-complacency of an Author contemplating the probable success and influence of a good Book, his own production; nay I can make allowance for a good Catholic, exalting a Saint upon Earth into an intercessor in Heaven: But who can forbear smiling, or rather weeping, at the airy visions of a returning golden age, on the very eve of an explosion of the age of iron, clothed in every circumstance of horror! Who but must be kindled into indignation, at seeing genius degraded into a servile minister of fulsome adulation, to the vilest of women? Who but must deride the pretensions so frequently advanced, by the wise and by the unwise, and as frequently exposed, to the gift of predicting future events.

In Latin, the same word, *Vates*, denotes both Poet and Prophet; and the two characters are by no means incompatible. Our Author is no mean Poet, he is a first-rate Naturalist, he is an eloquent Writer, and what is above all, he is a good and estimable Man; but events have demonstrated that he is but a wretched Prophet. A few short years have scattered his fond prognostics "into air, thin air." He makes it one of the glories of the reign of *Louis XVI.* that he "supported the oppressed Americans." Whatever political sagacity might have dictated, or predicted, at the time, respecting his interference in the dispute between Great-Britain and her American Colonies, the issue has demonstrated that this interference was injudicious and impolitic, as far as he was personally concerned. The support which he gave to *oppressed*
America,

Ah ! if it be possible for one single man to constitute on this earth the Hope of the Human Race, that Man is a King of France. He reigns over his People by love, his People over the rest of Europe by manners, Europe over the rest of the Globe by power. Nothing prevents his doing good when he pleases. It is in his power, notwithstanding the venality of employments, to humble haughty vice, and to exalt lowly virtue. It is farther in his power, to descend toward his subjects, or to bid them rise toward him. Many Kings have repented that they had placed their confidence in treasures, in allies, in corps, and in grantees ; but no one that he had trusted in his People, and in God. Thus reigned the popular *Charles V.* and the St. *Louises*. Thus you shall one day have reigned, O *Louis XVI* ! You have from your very first advances to the throne, given laws for the re-establishment of manners ; and what was still more difficult, you have exhibited the example in the midst of a French Court. You have destroyed the remains of

America, laid an accumulated weight on *oppressed* France, and precipitated that Revolution, which by progressive steps abridged his power, annihilated his splendor, hurled him from his throne, subjected his neck to the axe, and blasted the prospects of his Family. Here was one of the fearful re-actions of a righteous Providence.

The nauseous elegium pronounced on the *charms and sensibility of his august Consort* is still more intolerable. It is notorious to all Europe, that the lewdness, the pride, the prodigality, the ambition, the resentments, of that bad woman, filled up the measure of moral depravity among the higher orders in France, embroiled the two hemispheres of the Globe in the horrors of war ; and ruined her Country, ruined her Husband, ruined Herself, ruined her Posterity. Another of the re-actions of a righteous Providence.—H. II.
feudal

feudal slavery, mitigated the hardships endured by unfortunate prisoners, as well as the severity of civil and military punishments; you have given to the inhabitants of certain provinces the liberty of assessing themselves to the public imposts, remitted to the Nation the dues of your accession to the Crown, secured to the poor seaman a part of the fruits of war, and restored to men of letters the natural privilege of reaping those of their labours.

While with one hand you were assisting and relieving the wretched part of the Nation, with the other you raised statues to it's illustrious men of ages past, and you supported the oppressed Americans. Certain wise men who are about your person, and what is still more potent than their wisdom, the charms and the sensibility of your august Consort, have rendered the path of virtue easy to you. O great King! if you proceed with constancy in the rough paths of virtue, your name will one day be invoked by the miserable of all Nations. It will preside over their destinies even during the life of their own Sovereigns. They will present it as a barrier to oppose their tyrants, and as a model to their good Kings. It will be revered from the rising to the setting of the Sun, like that of the *Tituses* and of the *Antoninuses*. When the Nations which now cover the Earth shall be no more, your name shall still live, and shall flourish with a glory ever new. The Majesty of ages shall increase it's venerability, and posterity the most remote shall envy us the felicity of having lived under your government.

I, Sire, am nothing. I may have been the victim
of

of public calamities, and remain ignorant of the causes. I may have spoken of the means of remedying them, without knowing the power and the resources of mighty Kings. But if you render us better and more happy, the *Tacituses* of future times will study, from you, the art of reforming and governing men in a difficult age. Other *Fenelons* will one day speak of France, under your reign, as of happy Egypt under that of *Sesostris*. Whilst you are then receiving upon Earth the invariable homage of men, you will be their mediator with DEITY, of whom you shall have been among us the most lively image. Ah ! if it were possible that we should lose the sentiment of his existence from the corruption of those who ought to be our patterns, from the disorder of our passions, from the wanderings of our own understanding, from the multiplied ills of humanity : O King ! it would be still glorious for you to preserve the love of order in the midst of the general disorder. Nations, abandoned to the will of lawless tyrants, would flock together for refuge to the foot of your throne, and would come to seek in you, the God whom they no longer perceived in Nature.

END OF THE SECOND VOLUME.

